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ORIGINAL COMMUNICATIONS.

ON THE PHYSICAL EXAMINATION OF THE ABDOMEN, IN HEALTH AND DISEASE.

By CHARLES J. B. WILLIAMS, M.D., F.R.S.

Although practitioners have long (even before the examination of the chest became a study) been in the habit of proving the condition of the state of the abdominal viscera by means of inspection and palpation, yet it does not appear that any systematic attempt has been made to reduce this mode of investigation to *fixed principles*, which, by rendering it more rational and intelligible, would facilitate and extend its application in practice. The signal aid which the diagnosis of thoracic diseases has derived from the light of physical science, is a sufficient encouragement to attempt the elucidation of abdominal diseases in the same rational point of view. If it be objected, that the signs of the state of the abdomen, being derived chiefly from the touch, are rather to be learnt by experience than taught by precept, it may be answered, that although experience is absolutely necessary for proficiency in all matters in which the senses are concerned, yet a proper analysis of the objects of examination will render this experience much more intelligible and instructive. And this applies as much to the sense of touch as to those of vision and hearing. The *tactus expertus*, a fine delicacy of touch, capable of very nicely feeling and discriminating between impressions, may be more or less acquired by mere experience: but the *tactus eruditus*, the faculty of properly interpreting these impressions, and their differences, includes an exercise of the understanding, and requires a due consideration of the subject in its relations of cause and effect.

In the following papers, I propose to give an outline of the principles of the Physical Examination of the Abdomen, illustrated by facts, which have been supplied by clinical observation. The subject might be extended almost indefinitely in the way of example and further application of the principle; but such prolonged details would be neither con-

sistent with the form and plan of this essay, nor, according to my experience in teaching, calculated to facilitate the task of the learner.

EXAMINATION OF THE ABDOMEN BY INSPECTION.

The shape of the abdomen is determined by the conjoint influence of the walls and of the viscera contained within them. When these are in a healthy state and normal proportions, the shape of the abdomen in front is flat-convex, with slight rounded projections, which give a general rotundity to that region. With slight exceptions, presently to be noticed, the two sides of the abdomen are symmetrical; for, although the contents may differ, the walls, in health, have sufficient weight and tonicity to smooth down the inequalities of the contents. But where wasting or relaxation has rendered the walls very thin or flaccid, as in the aged and emaciated, the contour of the viscera may often be seen through the walls, and the want of symmetry becomes obvious. We may then sometimes trace the position of the viscera with great precision; and in such cases I have repeatedly seen not only the form of the superficial intestines, but their peristaltic motions also, and the changing prominences and depressions which these motions produce.[1] Such cases are instructive, in showing the varied position of the intestines during life, more accurately than the inspection of bodies after death can do.

Such inequalities and motions, however, are rounded off and intercepted by the abdominal walls in their ordinary state of thickness and tension; and the exterior of the abdomen generally indicates the symmetry of *animal life*. Yet, even through this equalizing surface, a correct eye can generally discern certain projections, constituting the exceptions before alluded to, representing the irregularity of parts, which are the seat of the *organic life* of Bichat. The first of these is at the lower four or five ribs on the right side, which bulge outwards a little more than those on the left, and give a rounder shape to the abdominal portion of this side of the chest. It need scarcely be mentioned, that this is due to the liver; whose weight and bulk infringe visibly on the statuary outline of the exterior. Another intruder on the outward symmetry of the abdomen is the stomach; which very commonly makes known its presence and swelling importance, by a prominence to the left of the epigastrium, including the cartilages of the lower left ribs. In persons who have suffered much from dyspepsia, these cartilages are often so prominent as to attract the notice of the patient; being permanently protruded by the habitual distension of the stomach with air; and this deviation from symmetry remains, although the cause may no longer exist. A slight prominence is frequently perceptible in the right iliac region, and at or below the umbilicus, from an accumulation of air in the cœcum and small intestines respectively.

As these inequalities are most conspicuous when the abdominal walls are thinnest and most flaccid, so they are least perceptible, and may disappear altogether, where the walls are thick or tense. The shape of the abdomen is then more perfectly uniform; but it will yet vary,

[1] On several occasions, I have pointed out this phenomenon to the students; and have further shown them, that this contraction of the intestines could be induced at any given spot by smart immediate percussion.

according to whether muscle or fat predominates in the walls; the former making it more flat, with the symmetrical prominences of the muscles and their divisions; the former giving it a smooth rotundity, with a greater convexity around the umbilical depression, where the layer of fat attains its greatest thickness.

After this brief sketch of the normal shape of the abdomen, and its varieties, we may proceed to notice such alterations, caused by disease, as may be available as signs. In order to inspect the abdomen well with this object, the patient should lie flat on the back, with the arms and legs straight, but relaxed, and resting on the bed. For some purposes, a sitting or standing posture may be preferred. In all cases, the observer should place himself so as to survey both halves of the abdomen at a glance; and for this purpose, standing at the foot or head of the bed, or at a sufficient height on either side, is better than a too close inspection. Of course, all covering should be removed from the abdomen, and a good light fall upon it.

Visible Signs of Disease in the Abdomen. Fæculent accumulation in the intestines usually causes a distension of the colon, which is manifest by more or less irregular prominence in the right iliac, and both hypochondriac, and left iliac regions; and if the small intestines are not also much inflated, the abdomen, although enlarged, has a flattened and irregular surface. Even when the small intestines are distended, there is rarely uniformity in the distension; and if the walls of the abdomen are thin or flaccid, the varying shapes of the most inflated bowels may often be distinctly discerned. The same remark applies to colic; in which, although the inflation may be excessive, and the tension of the abdominal muscles more or less constant on account of the pain, yet the spasmodic contraction of portions of the bowel causes inequalities and hollows in parts, visible to the eye, as they are also palpable to the touch, during the knotty twistings of the colicky spasm. In the meteorismus, or tympanitic enlargement of the abdomen in low fever, and in fatal prostration, the case is different. The distension of the intestines is uniform, wholly unresisted by peristaltic contraction, which is suspended, and the tonicity or elasticity of the abdominal walls is sufficient to give an evenness to the flatulent tumour, which is not observed where the intestines partially retain their tone. But even this uniform tympanitic distension (besides the differences to the touch, and to the ear) has a visible distinction in its more globular, or convex projection anteriorly, without the gravitating projections at the flanks or groins, which distinguish a similar degree of distension in ascites.

The chief visible characteristic of ascites, or liquid in the peritoneum, is the smooth roundness of the swelling which it occasions. When the quantity of effusion is small, this may be perceptible only in the most dependent parts; as in the flanks in the supine, and in the hypogastric and inguinal regions in the erect or sitting posture; and the contrast which the smooth fulness of these regions presents to those above, where intestinal and visceral inequalities are more than usually conspicuous, has often attracted my attention in incipient effusion, and led to the conclusive tests of palpation and percussion. When the fluid increases, so as to occupy the whole front of the abdomen, the smooth

rotundity of the enlargement becomes a further evidence of the uniformity of fluid pressure, which, obliterating the umbilicus, gradually expands the abdominal cavity into a large, smooth, and almost polished globe. But the weight of the liquid is also evident, and reveals its nature in the predominant fulness of the lowest parts; and, where the walls of the abdomen are not tense, in the comparative flatness, or less prominent convexity, of the part which lies uppermost. If, however, the walls be put much on the stretch, or there be much gas in the intestines, these are floated upwards, and give more or less prominence, which may remove the flattening proper to the liquid.

In the rare case of effusion of air into the sac of the peritoneum, the surface of the abdomen would be smooth and rounded as in ascites, but more convex anteriorly, and without the ponderating bulge at the lowest parts.

Enlargement of the solid viscera of the abdomen, if considerable, rarely fails to cause some change in the shape of the abdomen, both by their own protrusion, and by their causing an unsymmetrical displacement of the other viscera. A much enlarged liver makes the lower right ribs to bulge outwards, both at the side, in front, and sometimes behind. When the mass extends much below the ribs, it often gives an unusual breadth and prominence to the upper part of the abdomen; and yet this prominence is flatter and smoother than that arising from intestinal distension, which may often be seen below the site of the enlarged liver: change of posture does not materially alter the appearance. Enlargement of the spleen may cause a projection of the lower left ribs at the side in the left hypochondriac region. When extensive, it occupies the whole iliac region, and may reach to the umbilicus and pubis. When the left half of the abdomen is thus filled with the tumour, its smoothness and immobility form a visible contrast with the right side of the abdomen, which is distended by the rounded inequalities of the intestines, and is more affected by the respiratory movements. Change of posture may visibly affect the position of a much enlarged spleen: I have known it to form a visible projection when the patient lay on his face or leaned much forwards. It is very rarely that the kidneys become sufficiently enlarged to affect the shape of the abdomen in front; but I have more than once found a kidney dilated by pyelitis (commonly called abscess) to produce a visible fulness in the lumbar region of that side.

The peculiarities of the enlargement of the abdomen by the gravid uterus have occupied much attention, and form a subject too extensive to be introduced here. Suffice it to say, that although there are considerable varieties in different women, and in the same women in different pregnancies, owing to the condition of the abdominal walls, the quantity of liquor amnii, the mode in which the intestines are displaced, and other circumstances, yet pregnancy beyond the half term pretty constantly forms a visible tumour *above the pubis*, rising more or less high in the abdomen: but whatever the posture and whatever the stage, and whether the distension in the upper part of the abdomen be more or less, there is always a peculiar fulness in the hypogastric region which serves to trace the tumour to the pelvis. In this respect, pregnancy resembles ovarian tumours; and these frequently cannot by their visible

signs be distinguished from it. For although an enlarged ovarium generally occupies the side where it has originated, more prominently than the other, yet when it has attained a large size, it extends over the whole front of the inferior abdomen, and may not project more on one side than the gravid uterus often does. The diagnosis is rather to be sought in palpation, auscultation, and other symptoms. But all these tumours connected with the pelvis are generally visibly discernible from other causes of abdominal enlargement, by their more circumscribed shape, often presenting a terminal projection or outline upwards or at the sides, where the inequalities of the displaced intestines come into view, and vary at different times and in different postures; whilst the mass of the tumour remains little altered, and extends its unbroken continuity to the pubis, with which it is always in close apposition. The distended urinary bladder may form a tumour above the pubis, reaching to the umbilicus, or even higher: it is also to be distinguished by its well-defined upward limit; and its globular or pyriform shape rising from the middle of the pubis, often visibly characterizes it; but conclusive signs are to be found in palpation and percussion.

Tuberculous disease of the mesenteric glands is accompanied by enlargement of the whole abdomen, but the surface is formed by the intestines more than usually distended with air, and pushed by the nodulated masses underneath, forwards in contact with the walls of the abdomen, on which they impress the outlines of their convolutions: the abdominal walls, although tense, are generally so thin as to render their form visible. In my experience, it is very rare for the tuberculous glands to project so far as to reach the surface. On the contrary, in tuberculous deposits on the peritoneum, the result of chronic peritonitis, the solid masses are on the surface, and often form projections or inequalities, visible either at rest, or when the respiratory movements extend to the abdomen.

Malignant disease, when deep-seated, and to a limited extent, only affects the shape of the abdomen in the case of stricture of the alimentary canal; and then, by preventing or increasing its distension with gaseous and other matter. With malignant disease of the œsophagus precluding the deglutition of food, I have known the abdomen so collapsed as to appear absolutely empty, and the aorta could be seen pulsating on the projecting spine. With scirrhous pylorus, I have noticed in some instances a collapse of the lower half of the abdomen, whilst the epigastrium and left hypochondrium have been prominent from the enlarged stomach. In other instances, no such appearance has existed. In stricture of the rectum, colon, or ilio-cæcal aperture, it often happens that the portion of intestine above the obstruction becomes enormously distended, causing a visible prominence in the abdomen: and this may extend so far as to totally derange the ordinary position of the viscera. Malignant tumours connected with the liver, stomach, pancreas, colon, and bladder, may reach so near the surface as to form a visible projection of the walls of the abdomen, and by its shape and position it may give some intimation of its nature.

To conclude, it may be inferred from the preceding illustrations, that the visible signs of disease of the abdomen are constituted by such deviations from its outward form, size, and symmetry, as are obvious to

the eyes; and these become instructive in proportion as they may be referred to known morbid conditions, of the internal organs. In most instances they are not in themselves conclusive, but they are especially valuable in arresting attention at first sight, and in guiding the practitioner to the employment of the senses of touch and hearing, which may give him a more intimate acquaintance with the condition of the internal parts.

(To be continued.)

[*This paper will be continued in the succeeding numbers. We take this opportunity to contradict a report which has been current, that Dr. Williams is connected with this Journal. Except as a contributor of the articles to which his name is attached, Dr. Williams neither has nor ever had any share or cognizance in its composition.* EDITORS.]

ON THE SUBCUTANEOUS BURSÆ: THEIR ANATOMY, PATHOLOGY, AND TREATMENT.

By WILLIAM COULSON, Esq., F.R.C.S.E., Surgeon to the Magdalen, and Consulting Surgeon to the German, Hospitals.

[*Read before the Medical Society of London, November* 23, 1850.]

It has been remarked, that the anatomy of the lymphatic system was discovered by fragments, the thoracic duct by one observer, the lacteals by another, and the common absorbents by a third; nor was it till after the lapse of ages from the discovery of the first fragment, that a Mascagni appeared, who gave to the disjointed parts the character of unity and of system. The same remark applies to the organs of which I propose to speak.

To Winslow and Albinus may be traced the first notice of certain shut sacs, to which the name of Bursæ Mucosæ has been given, situated beneath certain muscles, or between the tendons and the bones, or between tendons; communicating occasionally with important joints, and formed of a membrane analogous to, if not identical with, the synovial sacs or membranes of the joints. After a time, these Bursæ attracted more notice, and began to be viewed as a distinct system. The second Monro described many not previously observed, and Sömmering followed, who discovered and described many more. The inaugural dissertation of Kosch appeared in 1782; in which he clearly points out the deep Bursæ, shewing that they are sometimes absent, sometimes small, and sometimes double, with bilocular cavities, which might or might not communicate; but, from confounding the deep and superficial systems, his observations are deficient in that order which alone can form the basis of future correct and profitable research. He was also aware of the existence of many of the Subcutaneous Bursæ; but he knew them not as a system, which they really are; he considered them as composed of cellular tissue, and essentially of the same structure as the vaginal Bursæ, and those of tendons and muscles; and he happily remarks, that these superficial Bursæ are not wholly foreign to the subject which he discussed; thus intimating a suspicion of a difference existing, which he did not then clearly comprehend. He knew the patellar and anconal Bursæ, and those

over the distal extremities of the metacarpal bones. In addition to these, which I shall call the system of the deep Bursæ, another system has, of late years, been described, called Subcutaneous Bursæ. It is the history of this system which forms the subject of this memoir.

History. Beclard, in his *Additions à l'Anatomie Générale par Bichat*, published in 1821, makes mention of some of these Bursæ, calling them subcutaneous; but he does not seem to regard them as a system; on the contrary, he constantly confounds them with the deeper Bursæ. At last, in 1825, Schreger published his excellent monograph, *De Bursis Subcutaneis*, in which he unfolds the nature, extent, and situation of these organs, and insists on their being received as one system, distinct from all others. Until this view be clearly comprehended, the pathology of these organs must ever remain obscure, and the treatment of their diseased conditions imperfect.

These Subcutaneous Bursæ are situated in various parts of the body, immediately beneath the integuments, of which they are an appendage. They are connected with, and belong to, the subcutaneous cellular adipose membrane, being in no instance continuous with the deep Bursæ, or with the tendons, muscles, or bones, which they protect. The structures composing them are, first, the capsule itself; secondly, certain filaments traversing it; thirdly, folds, or septa, being reduplications of the inner membrane, and these may be either partial or complete; and fourthly, small adipose corpuscular fringes. There is, also, the peculiar fluid secreted by the interior of the sac. In respect of their being shut sacs, intended to facilitate motion and to protect opposing surfaces, and as regards also the fluid they secrete, these Bursæ have analogies, no doubt, with the deeper Bursæ. In the more perfect synovial capsule of the knee-joint, for example, we not only find a shut sac, but septa forming the alar ligaments; being clearly analogous to the septa of the Subcutaneous Bursæ. Nor does the analogy stop here, seeing that we find the alar ligament so fully developed in some animals, as to divide the knee-joint into two cavities—thus converting it from an unilocular into a bilocular sac: this happens in many of the superficial Bursæ. The Subcutaneous Bursæ vary somewhat in form, and even, perhaps, a little in their structure. In the axilla, for example, where they have, probably, the simplest form, they resemble the cells of a bee-hive piled on each other. In the order of simplicity of structure, those of the groin follow. The mode of formation of these Bursæ in the fœtal state illustrates, I think, their varieties in the adult. For we find, sometimes, that the cellular tissue, in no way modified, takes the place of a properly developed Bursa; and this is exactly what happens up to the fifth month of fœtal life. At other times, in the adult, we find them small, but perfect; shewing that their development has been arrested. Even the anconal Bursa, viewed by Schreger as the most perfect, has been found, by other anatomists, small, contracted, or scarcely perceptible. Pathological changes also, by altering the condition of these Bursæ, reduce them to the tissue, out of which they were formed. Sometimes the interior is filled with a serous fluid, and the walls of the sac are thin, and almost pellucid; at other times they become soft, flaccid, porous, and reticulated, and lose their cohesion,—clearly indicating a retrogression to their primitive condition.

The fluid secreted by, and contained within, these Subcutaneous Bursæ, is held by chemists to be an aqueous solution of albumen, combined with saline matters. The epithelium, common to all true articular synovial membranes, cannot be discovered, even with the aid of the microscope, in the lining membrane of these Bursæ.[1]

It would seem that, prior to the second month of fœtal life, these Bursæ are open. A remark applicable to the entire system I now describe, is, that in youth the capsule is thin and pellucid; as age advances, the Bursæ become opaque and yellowish. Blood-vessels abound on the exterior of the sac. The inner surface of the dermoid segment resembles a serous membrane; the opposing surface, on the contrary, has a synovial appearance; that is, it is soft, pulpy, and as if covered with glistening elevations. But if these two surfaces differ, as has been alleged by Schreger, their secretions may also differ, giving a more complex character to the fluid than was at first supposed.

The Subcutaneous Bursa with which surgeons are most familiar, is the one situated over the patella. This Bursa, which may be called the patellar, is of a globular, or rather oval shape, the base being usually limited by the extent of the bone. The walls of the sac, in contact in the healthy state, are bedewed by a fluid analogous to what we find in the ordinary cellular tissue of the body, performing, no doubt, the function of synovia; like that fluid, as has been already mentioned, it is an aqueous solution of albumen, combined with saline matters.

The patellar Bursa belongs essentially to the superficial or subcutaneous system: it is exterior to the crural aponeurosis; and microscopic research, so much improved and extended of late years, merely confirms the accurate conceptions of Schreger. The epithelium investing the inner surface of the articular synovial membranes, is not found in the interior of this or of any other Bursa. The peculiar glistening fibres already described are found to stretch across at various points, forming septa or partitions, more or less complete. In many persons, two Bursæ, and even three, have been observed developed over one patella, perfectly distinct from each other. This duplification or triplification of the Bursæ is not confined to the patellar Bursæ, but extends as well to others. My friend Mr. Ireland brought me, some time ago, a patient with a Bursa of the size of a marble, situated over the right os magnum, which the patient wished to have removed. I dissected it entire, so that it rolled on the table: in three or four months afterwards, another Bursa, as large as the one which had been previously removed, made its appearance in the same situation. Thus may be traced to an imperfect knowledge of the anatomy of these organs, the theory of accidental Bursæ. When a second Bursa appears after the removal of the first, it is simply the enlargement of a second, coeval with the first, and observed then only for the first time by the surgeon.

In the popliteal space, we usually find three Subcutaneous Bursæ,—an external, internal, and middle. The history of these is curious:

[1] Mr. Toynbee examined for me some fresh fluid, which I removed from a carpal bursa. He says: "The gelatinous matter from the bursa consists of a transparent, viscid, semi-fluid substance, interpersed through which are rounded and ovoid cells, containing granular matter, and having one or two transparent nuclei attached to their inner surface."

with similar relations to all the others, they yet present, when enlarged, certain peculiarities. Both surfaces against which the enlarged Bursa presses being comparatively soft and yielding, the swelling does not assume the distinct globular form which those situated over bones exhibit. A case of this kind came under my notice a few months ago. A young woman, æt. 32, applied to me in July last, with a swelling in the right popliteal space, situated principally in the centre of the ham, and of the size of an orange, though more compressed. It was moveable, free from any pulsatory movement, and, when firmly pressed, gave an elastic feel to the fingers. The integuments were very little changed in colour, and the swelling was free from pain. I entertained no doubt of its nature, and punctured it by means of a grooved needle, when an ounce and a half of a white gelatinous fluid, much resembling the vitreous humour, escaped; a compress was applied over the part, strips of soap plaster over this, and a bandage tightly over the whole. On removing the pressure at the end of a week, a re-accumulation of the fluid had taken place. The swelling was again punctured, and the fluid, which was much less than on the previous occasion, allowed to escape. The pressure was applied in the same way as before, and removed from time to time. No fresh accumulation took place, and at the end of two months she was quite cured. Schreger has described this Bursa, but has given no drawing of it; he does not seem to have met with it in a diseased condition.

There is usually a distinct Bursa over each malleolus; but the external malleolar Bursa is the one most liable to be enlarged or distended with fluid. At one time it was thought, that in club-foot an accidental bursa was formed, to protect the integument at the point of greatest pressure; but this notion has been distinctly refuted. A Subcutaneous Bursa, occasionally of considerable size, very generally exists over the distal extremity of the metatarsal bone of the great toe, close to the joint, and the term bunion has been applied to it when inflamed or thickened. Subcutaneous Bursæ are met with over the trochanter major and tuberosity of the ischium, in the groins, and in connexion with the lower part of the superficial fascia of the abdomen.

Bursæ of this kind exist also, as has been already mentioned, in the axillæ, and over the condyles of the humerus. An enlarged Bursa over the inner condyle of the humerus came under my notice. C. W., æt. 18, applied to me on the 18th August, with a swelling over and a little above the inner condyle. As the patient, a few days before, was stooping to raise something heavy from the floor, he first felt pain in the part, and shortly afterwards discovered a slight swelling. At first, it was like a small indurated gland, but it gradually increased to the size of a walnut. It was unattended with pain, and gave, on pressure, an elastic indistinct fluctuating feel. On the 3rd September, I punctured it, and there exuded about a tablespoonful of transparent gelatinous fluid. Firm pressure was applied, and removed from time to time, and the swelling has not returned.

The Bursa which we may call anconal, as situated over the olecranon, is well known, and is often enlarged. There is also one over the distal extremities of the radius and ulna, and one on the carpus, corresponding to the surface of the os magnum, which is often enlarged. A girl, 13 years of age, applied to me on the 7th September, with a swelling like

a large marble, which had existed six months, and was situated on the posterior surface of the right carpus, over the os magnum. I punctured it with a grooved needle, evacuated a teaspoonful of white vitreous looking fluid. Pressure was applied over the part, and renewed every week for three times. The patient is now quite well.

That Bursæ in this situation may sometimes acquire considerable size, is shown by the following case. E. F., æt. 30, applied to me on November 15th, on account of a large Bursa over the os magnum, and a little to the radial side of it. About eight years ago it first arose, from her husband pressing this part of her hand very hard with his knuckles,—to use her own expression, by "his knuckling her". Immediately after this a swelling commenced, and at the end of a twelvemonth it had attained the size of a walnut. It was then punctured, and near two teaspoonfuls of fluid were evacuated. No pressure was applied; the swelling disappeared, until two years ago, since which time it gradually increased, till it reached the present size. The swelling prevented her from turning her hand back, and from wringing clothes. There was a great feeling of weakness in the joint, and occasional pain in and about the swelling, especially after exertion. On November 18th, I punctured it with a needle. As the case is still under treatment, I am unable to give the result: I feel no doubt, however, of its permanent dispersion.

There is a large Bursa over the first joint of the thumb, and others, often double, over the first and second joints of the fingers. That Bursæ exist in other parts of the body, I have no reason to doubt; one is not unfrequently found under the integuments, at the angle of the jaw; and others, extremely minute, and rarely demonstrable, are said to exist under the integuments of the back, corresponding to the spinous processes of the fifth, sixth, and seventh cervical vertebræ. More extended pathological inquiries may enable us still to discover others; for it is by their accidental enlargement that the presence of some of them has become known to surgeons.

Symptoms and Diagnosis of Enlarged Bursæ. A correct knowledge of the situation, volume, form, and position of the superficial or Subcutaneous Bursæ, will, on most occasions, enable the surgeon to appreciate the character of a tumour due to an increased secretion of the fluid in the interior of these sacs, to a thickening of their walls, or to an inflammatory action set up around or within their tissues. The symptom which naturally first attracts attention, is the existence of an oval, colourless, elevated swelling, in an unusual situation. Should the surgeon happen to be ignorant of the previous existence there of an original Bursal apparatus, for the protection of the integuments and for facilitating motion, he is at first lost in conjectures as to what the swelling may be. This has often happened. But, aware of the existence of the superficial Bursæ, and of the localities which they constantly occupy, the first glance at the case not unfrequently reveals to him all he requires to know. I need not therefore dwell on this symptom, remarking merely, that the tumour may be small or large, moveable, colourless, or deeply inflamed; or occasionally ulcerated on its surface, and discharging pus and serous looking fluids; or, by long neglect and the influence of time, it may appear as a firm unyielding tumour, without fluctuation or elasticity.

Even when uncomplicated, the enlarged Bursæ occasionally, though not uniformly, give rise to symptoms meriting attention in a history of these affections. A certain amount of inconvenience is often felt, varying in intensity with the volume, situation, and condition of the swelling. The enlarged anconal Bursa, for example, may attain a considerable size, and yet give rise to no more inconvenience than a slight sense of weakness after fatigue; even the patellar Bursa may be enlarged without proving troublesome to the patient. But in others, and these, perhaps, form the majority, it is otherwise. Those in the hand, especially the carpal, cause a great sense of weakness; they are unseemly, and the deformity becomes so unpleasant to the patient, as to induce him to request the removal of the swelling at all risks. In like manner, those over the malleoli deform the foot, and cause other inconveniences. Much lameness often accompanies the enlarged patellar Bursa; whilst the enlargement of the Bursa over the first joint of the great toe, produces not unfrequently the most intense suffering. Inflammation and suppuration follow; and death has been known to supervene from such a course, when injudiciously interfered with by the surgeon. Generally speaking, then, the symptoms indicating the presence of an enlarged Bursa are sufficiently well marked to lead to a correct diagnosis.

A knowledge of the course of the tendons will enable the surgeon to discriminate between an enlargement of a superficial Bursa, from that more troublesome and dangerous affection, the enlargement of the deep or profound; and he will regulate his treatment accordingly. Of these I do not speak at present, confining my remarks wholly to the system of the superficial Bursæ. These swellings, then, interfere with the free use of the limbs in which they happen to occur. The integuments may inflame and suppurate, and in this condition the case may for the first instance be brought to the surgeon. If neglected now, they cause intense suffering. The cause of the pain is not uniformly the same. In the enlarged Bursa over the great toe, for example, considerable pressure may be endured, provided a corn has not happened to be induced by that pressure over the enlarged Bursa. When this happens, the pain becomes intolerable, and is seemingly disproportioned, if I may say so, to the other symptoms and appearances; but it is well to know this, for the partial removal of the corn by the knife will often give immediate and great relief. A very usual symptom is a tingling sensation running down the limb, often attended with tenderness on pressure.

The position of the enlarged popliteal Bursa necessitates a careful diagnosis; it may be mistaken for abscess, or for other still more dangerous affections. It is sufficient merely to caution the surgeon on this point.

The detection of enlarged Bursæ in the axilla, and in the groins, and the discriminating them from other diseases, will occasionally require great attention on the part of the surgeon.

Enlargements of the superficial Bursæ have frequently, no doubt, been confounded with encysted tumours; their sequelæ also present difficulties in the way of a correct diagnosis, to be overcome only by a careful observation and history of the case.

Enlarged Bursæ may be either simply enlarged, or the enlargement may be accompanied with inflammation and all its usual appearances.

Erysipelas may arise in the course of the disease; or at least, œdema of the superficial fascia or cellular layer, in which the Bursæ are situated.

Pathology. The morbid anatomy of this system of organs has not been made the subject of any extensive researches. What has been observed amounts to this: the contained fluid, which in health merely bedews the surfaces of the sac, increases in quantity and alters more or less in quality. Originally, perhaps, more complex than chemists suppose (such at least seems to have been the opinion of Schreger), it may undergo further changes, as a result of chronic or acute inflammation. At times, the fluid resembles the outer layer of the crystalline lens, or the vitreous humours; that is, it partakes more of the character of a semi-solid than of a liquid; at other times, it is much more fluid, or it is more serous, obviously less abounding in albumen.

The semi-fluid substance has sometimes a yellowish appearance, at other times a reddish hue; sometimes it is very fluid, of a dark, dirty colour, the product, no doubt, of an inflammatory action. The sac may be wholly obliterated, or its walls so greatly thickened and condensed as to represent a solid tumour; or the enlarged Bursæ may shew a dropsical character, with softening of the inner membrane, perforations, and enlargement of the traversing tendinous cords. The absence of many of these Bursæ may depend, no doubt, on their obliteration in early years from blows, pressure, or other accidental violence.

The morbid appearances found in connexion with the enlarged Bursa of the great toe, have little or no reference to the smaller Bursa itself, but to the deformity caused by the simultaneous displacement of the metatarsal and digital bones of the toe. Nevertheless, when, by a separation or spreading out of the distal end of the metatarsal bones, the head or extremity of the first metatarsal bone becomes so prominent on the inner side of the foot as to be mistaken for an osseous tumour, the integuments passing over it become much attenuated in those cases where the deformity occurs in the adult. If congenital, or occurring in early years, no such attenuation happens. The Bursa itself, on dissection, presents a variety of morbid appearances, according to the progress made by the displacement of the metatarsal bone, and of the phalanges of the toe. The ligaments also undergo changes, but I cannot say that I have ever observed the formation of accidental Bursæ amongst their fibres. Fungous growths have been seen growing from the inner surface of enlarged Bursæ; and ill-conditioned sores are also sometimes present, depending partly on the nature of the surfaces affected, and partly on the constitution of the patient.

Causes. A variety of causes likely to produce enlargement and subsequent disease of the superficial Bursæ, have been stated by systematic writers. Unfortunately, however, by confounding these organs with the deep Bursæ and synovial sheaths of tendons, or by a meagreness of detail, many otherwise interesting observations have failed to improve our knowledge of the disease. The formation of accidental Bursæ I have shewn to be, in every instance, doubtful, whether on the prominent part of the spine in deformities of this column, or in any other part of the body. The inflammation and enlargement of the Bursæ over the great toe, happen how it will, is merely an enlargement of a Bursa already existing there, and not a new formation.

Enlarged Bursæ are frequently ascribed to severe pressure, sudden or long-continued, to blows, or other external violence; and to such a cause, no doubt, many cases may be traced. At other times, Bursæ enlarge wholly independent of any such causes. It has been usual to speak of the enlarged patellar Bursa as "the housemaid's knee," of the enlarged anconal bursæ as "the miner's elbow," etc.; but many cases of enlargement of the Bursæ cannot be so explained. Thus, then, they not unfrequently originate without any assignable cause. It has been said that corns and bunions (diseases very opposite in their nature, though, strangely enough, associated in surgical works), and enlarged Bursæ, ganglions, and tumours, are much more numerous in the rich than the poor; of this, however, I have my doubts. The mechanical causes assigned for the production of the enlarged Bursa over the great toe, and for the deformity of the foot, so frequently preceding re-enlargements of the Bursa, and giving rise to it, can be distinctly refuted. I allude more especially to the theory, that such deformities and diseases are caused by tight shoes.

It merits notice, that those who stand out most for the efficacy of mechanical causes in the production of such diseases, have uniformly avoided offering any explanation of the circumstance,—that the disease I have just alluded to (enlarged Bursa in the deformed foot), appears first not unfrequently in one foot, and is even confined to that foot, be it right or left; but if a rigid shoe were the producing cause, both feet ought clearly to be affected simultaneously. Again, when enlarged Bursæ occur, which cannot be traced to any mechanical injury, it not unfrequently happens that they occur at once in both limbs; this need not surprise us, as the laws of symmetry go far to explain the occurrence. Some have carried the idea of the production of enlarged Bursæ by accidental causes so far, as to include under the same category the actual formation of the healthy sacs, creating the system whose nature I now describe. They have also found Bursæ in situations where I cannot say I have ever observed them; namely, around corns, and between these semi-horny productions, and the true skin: but no such productions exist so far as my observations go, nor are they required to explain the intense suffering arising from pressure over a corn. The wedge-shaped body is at that moment slowly, but surely, growing inwards, piercing the true skin, and tearing its delicate structures asunder. Take off the pressure, or remove the offending wedge, and the pain ceases.

Treatment. It has been shown that many of the Subcutaneous Bursæ of the body are occasionally wholly absent, or, in other words, never were present. In this sense, then, they are not essential structures, at least, not in these persons. But it has also, I think, been proved that such Bursæ, when enlarged, may be obliterated by pressure, or the same result may be effected by pressure and puncture combined; or by inflammation, suppuration, granulation, and consequent adhesion of surfaces; or lastly, when, losing their original character, they have attained, by means of fibrinous deposits, the appearance and nature of a solid tumour, they may be extirpated by the knife, and so altogether removed. These considerations, aided by a sound anatomy and physiology, which we owe chiefly to Schreger, have led me to the adoption of a simple mode of treatment, applicable to most, if not to all cases, of enlarged Bursæ.

Let me first suppose, that a case of enlarged Bursa, unaccompanied with any other affection, no matter where placed, presents itself; that of the great toe need form no exception; an enlargement of the natural patellar, anconal, or malleolar Bursæ; the question arises, how is it to be treated? Abundance of evidence exists to shew, that the treatment by rest and pressure, simple friction, blistering, friction with mercurial ointment, iodine, etc., all but uniformly fail in effecting a permanent cure.

When these fail, recourse is had to a puncture, which, made with a lancet, amounts generally to a short incision; or an incision, more or less extensive, is made into the enlarged Bursa, the contents evacuated, and pressure applied. This method, no doubt, succeeds; but it is unnecessarily severe, and is not unattended with danger, even in the uncomplicated class of cases. But it not unfrequently happens, that before the surgeon has seen the case, inflammation of the integuments, and of the superficial fascia in which the Bursa lies, has set in, with more or less severity. Now, in such cases, the modes of treatment alluded to are clearly inapplicable, and have occasionally been attended with very serious results.

Mr. Key, in an excellent memoir on ganglia or bunion, distinctly refers to a case, in which death happened from the incautious interference of the surgeon. He is speaking of the enlarged Bursa on the great toe, which complaint, when complicated with the peculiar deformity I have already spoken of, he calls bunion. "I have known", he says, "gangrene of the foot and death ensue from opening an inflamed and suppurating bunion; and in three cases, exfoliation of the bones, with a most tedious and painful suppuration of the surrounding structures". He condemns all interference in such cases, in which opinion I coincide, although maintaining very different views, as to the nature of the affection, from those of the distinguished surgeon whom I have just quoted.

The mode of treatment which I prefer to all others, is simply puncturing of the enlarged Bursa with a grooved needle, such as is used for exploring tumours and swellings of doubtful character. After the evacuation of the contents, pressure is applied, by means of soap-plaster and bandage; this is renewed from time to time, and puncture of the sac repeated if necessary. The result is uniformly a permanent and safe cure. If to this we add the almost painless nature of the operation, we have in this mode of treatment all that is satisfactory to patient and surgeon.

When the enlarged Bursa becomes seriously inflamed, we should endeavour, by rest and other means, to subdue the inflammation: nevertheless, a puncture such as I have described may be practised, even in these cases, with advantage to the patient.

In a case of anconal Bursa, accompanied by high inflammation, I punctured the swelling with a grooved needle; pressure was employed; no bad results followed, and the patient recovered. Miss M., æt. 50, applied to me, October 18th, with an enlargement of the Bursa over the right olecranon, the skin being highly inflamed. The inflammation had existed for ten days, and became so severe as to compel her to seek advice. I punctured it, and two teaspoonfuls of dirty looking serous fluid came out; pressure was applied, and at the tenth day she recovered.

Sometimes the integuments over the Bursa ulcerate, and under these circumstances, pressure may also be employed, as in cases of simple puncture. In cases of long standing, when the enlarged sac has put on the appearance of a sarcomatous tumour, excision is no doubt the remedy, having a due regard to the integuments. The mode of treatment by the seton has been strongly recommended by many good surgeons, and I have myself adopted it with success; but a more enlarged experience has convinced me that this mode of treatment, besides being a tedious and unnecessary process, is not on all occasions unattended with danger. I think it only applicable to those cases where the question arises as to their destruction by the seton, or removal by the knife.

The following interesting cases were communicated to me by my friend, Mr. Cocks, of Hatfield, who has kindly permitted me to publish them.

"I had", says Mr. C., "for several years, an enlarged Bursa on the second joint of the left thumb, produced by a blow on the fore part of the saddle, in checking the bridle of my horse. It became as large as a pea, and was rather annoying and unsightly; I punctured it with a lancet, when a pinkish crystalline mass came from it; pressure was applied, and it healed. It soon grew again, and again, and the same operation was repeated. But, tired of this plan, after opening it, I rubbed the inside with a camel's-hair brush, dipped in a solution of nitras argenti (4 grs. to ʒj of water). In a few days, it suppurated; the lining membrane sloughed away; it soon healed, and has been so for more than a year. The next case was under my son. A servant girl, from London, had a very large Bursa on the left outer ankle, just below the end of the fibula, stretching across the dorsum of the foot, about two inches long, and at least an inch wide. She had applied to several medical men in town, all of whom advised 'nothing to be done'. It was opened by my son; solution of nitrate of silver was injected into it, and pressure by compress and bandage applied. In a few days, the greater part of the sac was obliterated; the fluid (which in this was limpid) collected in the non-adhering portion. The same treatment was applied to this part, which was followed by considerable swelling of the foot and leg. The inflamed leg was treated with cold saturnine lotion; but a warm poultice was applied to the tumour, in order to bring on suppuration as soon as possible. The case went on favourably; and in three weeks she was able to go about quite well".

No cases of enlarged Bursæ have attracted more attention than that of the great toe; when painful and enlarged, it is difficult to treat, for reasons I have partly explained. So much confusion prevails in surgical works, as to the true nature of the proper method of treatment of this troublesome Bursa, when enlarged and inflamed, that I may hope to be excused, if I again direct attention to it. The Bursa situated on this part may become enlarged and painful, like any other superficial Bursa, and require, for its relief and cure, the treatment I have recommended. But that which, in a peculiar manner, complicates the pathology of this enlarged Bursa, is the accidental deformity, caused by a projection inwards of the digital extremity of the first metatarsal bone. The phalanges of the great toe itself turn outwards to such an extent as to over-

lap, or pass under, those of the second,—a deformity, in fact, amounting to all but complete dislocation. As the metatarsal bone recedes more and more from the second, the digital extremity seems to enlarge, causing a remarkable prominence inwards of this part of the foot.

In the mean time, as the deformity increases, the bursa is placed, daily, under pressure, more and more severe; the same shoe no longer fits the form of the foot, now much broader in the distal extremity of the metatarsal region; the Bursa enlarges, and becomes extremely painful. A succession of Bursæ form on the same spot; they open, and perhaps suppurate: and cases are stated to have occurred in which the joint itself has been laid open, and caustic applied to the inner projecting portion of the metatarsal bone, as if it were of morbid growth.

The disease, then, in its most aggravated form, that is when complicated with this deformity, consists, simply, in an inflamed Bursa, generally produced by pressure, with a partial dislocation of the great toe, mainly dependent on a displacement inwards of the digital end of the metatarsal bone. As these two affections are quite distinct, though often confounded, I need not here inquire as to the causes giving rise to the deformity. It will be sufficient to observe, that tight shoes, or rather shoes no longer fitting the altered form of the foot, however they may give rise to an enlargement of the Bursa, in no case produce the deformity; for it is now universally admitted that the deformity is most frequently congenital, or comes on in very early life; that it occurs in hundreds who never wore shoes, or boots, and that, even when present, it does not necessarily give rise to enlarged Bursæ. The cases which most frequently came before the surgeon, occur in persons who get the deformity after the meridian of life. The deformity takes place as a result of the weakening of those structures binding together the metatarsal bones; the larger one recedes from the second, and the muscular forces, acting on the great toe, assist in adding to the deformity, by causing it to approach the others. The treatment of such complex cases is exceedingly difficult. It is here that rest, in the recumbent posture, becomes absolutely necessary; the inflammation must be subdued, or allowed to subside. Should a corn have formed on the enlarged Bursa, it had better be cautiously pared down, as the skin has probably become much thinner over the Bursa. When the foot has become tranquil, other questions arise as to the treatment, chiefly bearing on the form of the shoe; a boot, properly made of very soft leather, such as is worn in France, may be used without aggravating the complaint. Shoes, I apprehend, are bad, as they necessitate a somewhat tight ligature over the instep; this causes intense pain immediately below it, or nearer to the toe. In time the integuments may and do become accustomed to the form of the foot, and the Bursa no longer enlarges. This, I think, is the ordinary course of events, even in cases, by no means unfrequent, where the deformity has proceeded to its greatest extent. When the deformity is natural to the person, the Bursæ do not naturally enlarge, and therefore give little or no trouble.

ON THE EPIDEMIC OPHTHALMIA

WHICH HAS PREVAILED IN THE WORKHOUSES AND SCHOOLS OF THE TIPPERARY AND ATHLONE UNIONS.

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Surgeon to St. Mark's Ophthalmic Hospital, Dublin; and Assistant Commissioner for taking the Census of Ireland in 1851, etc.

Some notice of my reports to the Poor-Law Commissioners upon the Epidemic Ophthalmia which has prevailed for some time in a few of the Irish workhouses having already appeared in the newspapers, and a few detached fragments having been surreptitiously obtained and erroneously printed for the purpose of review, I am induced to write the following observations, and to give a corrected edition of my *Medical Report* to the profession. I have but few remarks to make with respect to the observations appended to the fragments which have been published elsewhere. They are these:—I was applied to, in the beginning of December 1849, to visit and report on the Ophthalmia which then raged in the Athlone Union. I did not do so, because I did not consider the sum offered a sufficient remuneration for my professional services. Upon inquiry, I have been informed that, in accordance with my desire, a copy of my letter to the Medical Officers of the Tipperary Union was forwarded by the Commissioners to the Medical Attendant of the Athlone Workhouse, which I visited a few days after I had been in Tipperary, and where the same form of disease prevailed; and that, in other instances, it was applied for by the medical attendants themselves.

With respect to any previous reports which may have been made to the Commissioners upon the Ophthalmia, I have nothing whatever to do. If the guardians of any particular union do not choose to adopt, or the Poor-Law officials to enforce the recommendations and suggestions contained in a report, no medical man should take offence thereat, any more than he would with a patient in private practice, who sought his advice, received his prescription, and paid the usual fee, but either from perverseness, indolence, or want of faith in the proposed remedies, or in the mode of recommending them, gave no further attention to the matter.

It was not my original desire or intention to write upon this Ophthalmia, but to leave to the Poor-Law authorities, to whom they belong, to publish my Reports or not, as they thought fit, in their own proceedings: but the use lately made of my letter to my medical brethren (not of the Athlone, but of the Tipperary Union, on which alone I was called on to report), has compelled me to adopt the present course. I cannot, however, but feel complimented by finding any one generous and philanthropic enough to print and publish at their expense any portion of my writings, no matter how obtained; and I only regret, that such publication was not through a medium where it might have had a more extensive circulation. How far that letter is in accordance with the established rules of consultation communications, and professional etiquette, even where private patients are concerned: and how far the statements and recommendations contained in it are based on modern observation, and the scientific management of the disease under consi-

deration by the most enlightened ophthalmic surgeons of the present day, the medical profession are the best and only judges. It is gratifying to me to be able to state, that the medical officers of the Tipperary Union not only willingly adopted all my suggestions, but have, in a written communication, expressed their satisfaction at the course which I pursued. The notes now appended to my Medical Report are the only additions made to it since it was sent to the Poor-Law office. Neither has it in anywise been altered or amended, except so far as the usual corrections of the press required.

The lamentable consequences of the Irish epidemic do not seem to be the result of any defect in the Poor-Law, any more than the ravages committed by the Egyptian Ophthalmia among the soldiers of the British Army in 1803 arose from the inadequate resources of the Minister of War, the defective regulations of the Horse-Guards, or the ignorance of and insufficient treatment adopted by the medical officers. In both Tipperary and Athlone, the local guardians were superseded, and vice-guardians appointed; but whichever they are, the guardians of the Irish poor, paid or unpaid, should learn that it is neither justice to those entrusted to their care, nor economy to the rate-payers, not to provide suitable accommodation and other necessaries for the miserable patients, affected with a disease like that on which I have been called on to report. If it were a fatal disease, the result, according to the doctrines of some, might justify the means,—at least the mortality would lessen the expenditure; but it is not so. By this disease, people are only rendered incapable of earning their livelihood, and, in some instances, of ever leaving the workhouse; and so they remain a permanent tax upon the union. It should also be generally known, that blind people are remarkably long-lived. It, therefore, behoves the guardians and local authorities of our Irish unions, calmly and gravely to calculate the probable expense of the support for life of blind persons under twelve years of age, before they allow them to be crammed by hundreds into an unhealthy store or a damp sunken malthouse. To some very philanthropic persons, the doctrine may appear revolting and uncharitable; but it does, nevertheless, appear to me inconsistent to decorate the dead body of a pauper in the paraphernalia of shroud and coffin, merely in compliance with popular usage, while the living pauper is unfurnished with the means of retaining that health and those senses, without which there can be no hope of his ever regaining independence.

Many a good soldier, not slain in battle, has been, and is still, carried to his "rest" with "his martial cloak around him", without exciting the indignation of his comrades! Some outcry may perhaps be made by well-meaning, but uninformed persons, on account of the number of people who have lately become blind in the Irish workhouses. Before, however, such persons come into the field, they should require from the Horse-Guards an accurate statistical return of the number of soldiers who, after a considerable sum of public money has been expended on their training, and, as frequently happens, their transport to the Colonies, are annually invalided, and sent home either totally blind and so entitled to a pension for life, or partially deprived of vision and furnished with a pension for a limited period; and, be it remembered, the blindness under which they labour has arisen from the very same disease as that which has spread through the paupers in some of the Irish workhouses,

It must be borne in mind, that the observations contained in this paper are of a special, not a general nature; applicable to a peculiar affection appearing under circumstances, and among a class of people, such as neither this nor any other so-called civilized country ever presented before. Did not the late "famine fever," as it was termed, and the dysentery present such peculiarities as never had been observed in any of our previous epidemics? I was called on to report, not on Epidemic Ophthalmia merely, but on the exact condition and the best method of arresting the disease under which the paupers in certain districts laboured. To occupy any portion of this paper with pages of extracts from the writings of Vetch, Saunders, Mackenzie, Lawrence, and others, whose works are accessible to the profession, or to give a *réchauffé* of opinions and descriptions promulgated a quarter of a century ago, would partake more of system-making and book-learning than observation. I shall therefore confine myself as much as possible to facts of which I have been myself cognizant, or of which I have received accounts from credible authorities.

OPHTHALMIA IN THE TIPPERARY UNION.

In compliance with the request of the Poor-Law Commissioners, I visited the Union Schools, the Auxiliary Workhouse, and the Ophthalmic Hospital at Tipperary, upon the 12th of last August, and those at Athlone on the 23rd of the same month. From the evidence which I received, and from my own observations in the neighbourhood of the town of Tipperary, it would appear that an Epidemic Ophthalmia had for a considerable time prevailed among the lower orders in the adjoining country parts. The injurious effects of this disease, in the form of complete loss of one eye, staphylomata, leucomata, opacities of the cornea of various shades, and chronic Ophthalmia, etc., were manifest in a great number of the people I encountered; particularly in those emaciated and broken down in health, whom I saw in the town of Tipperary. Indeed I was strongly reminded during the day I spent in Tipperary, of scenes I witnessed many years ago in the bazaars of Egypt.

From the account given me by the physicians of the Union, it appears that the disease first commenced among the pauper children of the girls' school in the town of Tipperary, in the spring of 1849, and that it went on progressing until October in that year, when it assumed a more violent and decided character, so as to require their being removed for treatment to a separate house, the ordinary hospital of the parent workhouse being so much overcrowded as not to permit of their reception. What number of persons labouring under Ophthalmia were treated in the wards of the workhouse hospital between spring and autumn in the year 1849, I have had no means of ascertaining. A separate hospital becoming necessary for the reception of Ophthalmic patients, the guardians hired an unoccupied house with an adjoining store, in the town, for that purpose. At the time of my visit, it had been given up upon the recommendation of the medical men and the inspector, and the children had been removed to a much more healthy locality; but I nevertheless inspected it and reported upon it to the Commissioners, in the hope that some means will hereafter be taken by the Poor-Law authorities to prevent the guardians and local officers,

many of whom are quite unacquainted with the value of pure air, cleanliness, warmth, proper ventilation, sewerage, and other sanitary matters, in arresting the progress of disease, or contributing to the comfort of the diseased, from again falling into like errors. I am fully conscious of the difficulties which beset this subject, and of the ignorance as well as the apathy which prevail upon it among all classes of the community,—an ignorance and an indifference lamentably exhibited, even in the private dwellings of some of the middle and better orders of society,—as every medical man engaged in extensive practice is well aware. Who amongst us has not daily to enter houses where he is immediately assailed with a stench of sewers, kitchens, areas, and privies? I need not describe the scenes which meet him in his further progress to the dormitories, within the dark confined space of one of which may be found his patient, scarcely visible amidst the voluminous coverings of a feather bed. The bed itself, surrounded by thick close-drawn curtains, is generally one half the size of the room, and the air of the apartment is at times stifling in the extreme. If a Poor-Law guardian is willing to let his wife or child stew out a fever or a pneumonia under such unhealthy circumstances, we cannot expect him to provide wholesome accommodation for the pauper. But the authorities in a distant town or country village can scarcely be blamed for such matters, when we remember the condition in which the poor of Dublin were left at the fever-sheds in the beginning of the frightful epidemic of 1846, until attention was called to the subject by my lamented friend, Dr. Curran. Nor can we well exclaim against guardians and inspectors for defective ventilation in auxiliary workhouses and temporary schools, when, in some of the first-class houses of the metropolis, partial congestion is daily experienced by those who sit out a crowded dinner under the heat and glare of six or eight gas-burners placed in different parts of the room, without a single aperture in the ceiling or walls to permit any portion of the vitiated air to escape!

What is to be done, when an epidemic of an infectious character suddenly either springs up among the people, or spreads within the workhouse or its schools? Separate accommodation must be procured. Tents and sheds have been the usual means employed by Boards of Health and other authorities in such emergencies. For fever and dysentery, these may be applicable during the warm months of summer; but the localities for their erection should be properly chosen, in order to prevent such an accident as occurred at Navan during the last epidemic of fever, when, owing to their exposed situation, several of the fever-sheds were swept away one night, and some of the miserable patients left uncovered during the hours of storm and rain which followed. When an epidemic like Ophthalmia, affecting children and young persons, or when cholera, or any similar disease, which cannot be well treated in temporary sheds, breaks out, the only resource left for those who have to provide for the poor, is to hire a house, the first that can be had; and as few persons are willing, even at a high rent, to let their houses for hospitals, the consequence is, that *of necessity* old dilapidated dwellings long unoccupied, mills, corn stores, breweries, and such other buildings, with low, ill-ventilated lofts, and unprovided with sewers or privies, are really the only ones which can be procured. But still, some of the modern knowledge in sanitary matters, so much boasted of by the learned, and at

present occupying both the public mind and the attention of the legislature, should be put in force, to render these buildings as wholesome as possible under the circumstances. I therefore, in my Reports, impressed upon the Commissioners the necessity of appointing some proper officer to see that such matters are strictly attended to, both in the choice of a locality, and in the best mode of turning a store or dwelling-house into a suitable hospital. The majority of guardians in Ireland at present know nothing of such things, and even if they did, might be unwilling to encounter the necessary cost. Inspectors are uneducated in sanitary concerns; and until a course of lectures upon hygiene, somewhat similar to that required in the army, is made a part of the curriculum of education by our schools and licensing bodies, we cannot expect the medical men of the civil service to be thoroughly acquainted with the best mode of applying all the modern improvements of science to the construction of hospitals, their heating, ventilation, lighting, etc., etc. Certain it is, that it would not only be just and merciful towards the poor, but in the end, economical to the rate-payers, to procure the services of a person educated in medicine and hygiene as well as in architecture, in order to fit up these temporary hospitals. I do not consider these observations a digression from the matter in hand, and I have been induced to make them, from the impression which I received on visiting the temporary hospitals provided for ophthalmic patients at Tipperary and Athlone. Upon inquiry at both these localities, why the hospitals which I visited were chosen, the answers were, that they were the only ones which could be procured at the moment;—good; but much more could have been made of them if such a system as I have suggested had been carried out. With respect to the influence of the medical officers of the Irish workhouses generally, it must be remembered that they can only suggest, that they cannot enforce, and they are frequently the family attendants upon the guardians and other officials, as well as the rate-payers, and moreover, that their income is more or less dependent upon these persons.

In answer to a series of questions which I addressed to Dr. W. T. Reardon, the assistant-physician who has had charge of the ophthalmic cases at Tipperary, he informs me, and his answers are confirmed by my own observations, that "the class of patients attacked were debilitated starved female children; generally those recently admitted, worn out by previous want and privation of every kind, many having refused to come into the house in consequence of its crowded state, until they were exhausted to the last degree. Several were admitted this year (1850) labouring under Ophthalmia; some had already lost one eye, and the other was in a state of violent inflammation. The general health of the workhouse was very bad indeed; we had cholera, dysentery, fever, and small-pox, as well as several cases of gangrene and dropsy. There was no proper sewerage, neither was there sufficient water to cleanse the entire house or purify the privies, except what a horse brought daily from town. The vice-guardians got some sewers made; but from these being frequently opened to admit others, the smell from them was very foul. The deaths in the workhouse, since spring, have been very numerous, the mortality varying from thirty-six to fifty weekly. Few men had the Ophthalmia; I would say, not one healthy man contracted it, and very few healthy women, except the wardmaids."

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From October 1849 to March 1850, there were 1525 cases, 848 males and 677 females, treated in the Jail Lane hospital of Tipperary. In consequence of the representations and remonstrances made to the Poor-Law Inspector by the physicians, to the effect that it was impossible to afford the necessary treatment to the unhappy inmates of this establishment, it was closed upon the 18th of July last, and the 302 patients whom it contained were removed to a large building in Meeting-house Lane, also in the town of Tipperary, and which was originally built for a corn store. Although the building used as an hospital in Jail Lane had been given up, and consequently did not contain patients, I conceived it to be my duty to visit the premises, in order to point out to the proper authorities how unsuited it was to the purpose intended, in the hope that, by so doing, the like occurrence might be prevented in future. I likewise entered into a minute description and admeasurement of the newly-formed Ophthalmic Hospital in Meeting-house Lane, shewing that it was improperly ventilated, heated, and lighted, that its wards were, from the very nature of the building, quite too low, and that it was most disadvantageously situated, having but a most imperfect sewerage, not possessing a proper privy, but in lieu thereof, a moveable one, by means of a soil-cart; and that the yard, the only place in which the children could take exercise, was quite too small, being but twenty-four yards long by twenty broad, surrounded by high walls, one of which was the side of the Dysentery Hospital. I pointed out such means as appeared to me absolutely necessary, to render this hospital habitable during the ensuing winter; but I also strongly urged upon the Commissioners the propriety of recommending the guardians to take a country place, the residences of some of the neighbouring gentry (so many of which are now unhappily vacant in Ireland), to which all the children should be removed as soon as possible. In an Essay such as this, it is unnecessary for me to enter into the same minutiæ with respect to those defects in the establishment, as I detailed in my Report to the Commissioners; but it is of great importance that those who are the legal guardians of the poor should understand, that where a vast number of persons, whose health and spirits have been previously broken down by want and privations of every description, are congregated together, attention to cleanliness, diet, clothing, lodging, warmth and ventilation, the means of taking exercise, and some provision for amusement or occupation, is of as much, if not of greater importance than any merely medical treatment that could be adopted. Such treatment, after all, must be based upon some general principle, and cannot, certainly, with the small staff of attendants allowed by the guardians, enter minutely into the circumstances of each individual case. The yard of the hospital, although clean and well gravelled, was totally insufficient for the children to take proper exercise in: I therefore recommended that such of the children as were convalescent should be sent out into the fields daily to play, and that gymnastics and other means of amusement should be provided, until proper accommodation were procured for them in the country.

There had been 241 new cases admitted since the hospital was opened, making in all 2068 cases of Ophthalmia in the Tipperary Union, between the 29th October 1849, and the day of my inspection,—the 12th of August 1850. I found 340 patients, 170 boys and 156 girls, aged from five to fourteen years upon an average, and 14 adults, in hospital. My first

business, after having inspected the premises, was to procure a registry, by means of one or two intelligent clerks, of the name, age, and sex, of every inmate, in order that I might attach such observations to each entry, as would enable me subsequently to draw up a statistical report upon the condition of the disease in the workhouse generally, and on the present effects as well as probable results of the Ophthalmia in each individual case. Without such documentary evidence, I believe it would be quite impossible to make anything approaching to an accurate statement, as to the result of an epidemic of this nature in three hundred and forty cases. Moreover, vague rumours spread with respect to the number of persons who become blind in such and such unions; and, as even medical men will differ on such subjects, and consequent discrepancies appear in reports, I would impress upon persons similarly engaged, the propriety of adopting the means which I have described for registering the cases. And as an unjust outcry of this nature might be raised against the permanent medical attendants, I thought it right that the commissioners and guardians should distinctly understand that the meaning to be attached to being "totally blind" was,—that both eyes had either become wasted and collapsed, or so much disorganized as to render all hope of vision irredeemable. But there are now many persons in the workhouses, with closed pupils, extensive leucomata of the corneæ, etc., the results of the Ophthalmia, at present depriving them of vision, who may hereafter, by treatment or the effects of nature, recover a fair amount of sight. Thus, in those whom one practitioner considers at the moment "blind," another may see a fair hope of recovery by operation or otherwise, and each will, consequently, place such persons in a different category. The admissions into the hospital from the 30th of March to the 20th of August, varied from 17 to 70 weekly, the disease appearing to increase with the warm weather. Statistical statements such as this, where I myself could not have been aware of the facts, were kindly furnished me by the assistant-physician who has had charge of the Ophthalmic Hospital.

In company with the medical attendants, Dr. Evans and Dr. W. T. Reardon, I then proceeded to examine the cases individually, and to consult with these gentlemen as to the treatment to be pursued, and the best mode of arresting the further progress of the epidemic; and with their *sanction* and *concurrence* I addressed to them the letter which will be found appended to this communication, and of which such unwarrantable use has already been made for private purposes. If the Poor-Law authorities, having been officially informed that Ophthalmia is spreading among the inmates of a certain workhouse or its schools, forward a copy of that letter to the medical attendant thereof, it remains for him to judge how far the disease, which I have described, is the same in those persons under his care, and to exercise his judgment with respect to his adopting the suggestions conveyed, at their desire, to my medical brethren in Tipperary.

Among the 340 patients, each of whom was individually inspected, were to be found cases of Ophthalmia or its results in all stages, from those recently affected either with simple conjunctivitis, muco-purulent Ophthalmia, or the more violent and purulent form of the disease, to those presenting collapsed globes, or staphyloma, either of the cornea and iris, or of the entire eye; but the vast majority laboured under chronic

Ophthalmia with granular lids, and a great many presented ulcers of the cornea, some of which had just penetrated, thus allowing a small portion of the iris to protrude. The granulations upon the conjunctival surface of the upper lid were the largest I ever witnessed, many of them exceeding in magnitude the size of a split pea, and some resembled the protuberance which forms upon the end of the divided muscle after the operation for strabismus; or were like the little fungus nail-headed excrescence, which grows from the conjunctiva of the lid in cases of neglected tarsal tumour, attached by a peduncle, and capable of being removed with facility by means of a curved scissars. In some cases, several of these existed alone with the general villous or granular condition of the conjunctiva; they were principally congregated above the external canthus; and to such an extent had they grown, in some instances, as to produce a manifest protrusion of the lid, like that seen in ordinary tarsal tumour. Without their removal, it could not be expected that any permanent improvement could take place. A great number of such cases were treated at the time of my inspection, and such remedies were also employed as I have pointed out in my communication to the physicians, and which are therefore unnecessary to be specified here.

The disease which I witnessed in Tipperary, I believe to be a modified form of that denominated Egyptian Ophthalmia; which I have seen, upon a large scale, at Cairo, and in other parts of the Levant; and which committed such ravages in the British army at the time of, and subsequent to, its occupation of Egypt in 1803. It still exists among our troops; and a number of soldiers, both at home and in the colonies, annually lose their sight from it. It has also lingered in particular regiments for years, notwithstanding every effort made to eradicate it, and such regiments having frequently changed climates. In gonorrhœal Ophthalmia, we see it in its worst form in Europe. It used formerly to spread in public schools, particularly Charter-houses; and it has several times appeared in the country parts of Ireland, and extended among the people not then subject to any particular privation, and apparently in previous good health. So long ago as 1701, an epidemic of this nature broke out near Castletowndelvin, in the county Westmeath, by which vast numbers lost their eye-sight.[1]

This Ophthalmia is manifestly contagious, as much so as fever, dysentery, cholera, or any other established contagious or infectious disease,

[1] I became aware of this fact in searching through the papers and manuscripts of Sir Thomas Molyneux, whose Memoirs I published in the *Dublin University Magazine* for 1841-2. "From the effect produced, and the numbers who were attacked together, with the time of year at which its attack was most violent, we have little doubt on our minds that it was some virulent inflammatory epidemic, some form of Ophthalmia, and not improbably that known under the name of Egyptian. The paper to which we refer is a list of 'Queries proposed by Dr. T. Molyneux, to John Hill, curate of Castletowndelvin, in the county of Westmeath, concerning the extraordinary distemper that took away the sight of many in that parish.' The answers to this set of questions form a most interesting statistical document, as the name of each person is given, their age, sex, and the exact effect on the sight, whether total loss of vision of one or both eyes, and the whole number who were affected, etc."—*Dublin University Magazine* for December 1841, vol. xviii, p. 753. I have introduced this extract, because I have not access to the original document at present; and, as it is among the family papers, some time might elapse before I could refer to it.

arising from some peculiar state of the atmosphere acting on those who happen at the time to be good recipients for its seeds. Or it may be propagated by direct contact of the matter or discharge from one person to another; and in this mode it is supposed that the nurses and ward-maids of the Poor-Law establishments contracted it. An impaired state of the constitution; broken down health and spirits; sudden alteration in diet; crowding together, particularly at night-time, in large masses; and the want of pure air and proper exercise, have, I think, materially conduced to spread the epidemic in the Tipperary Union. At the same time it must be remarked, that very many apparently healthy children have contracted the disease, and that, in several instances, it was brought into the workhouse by persons from the neighbouring country parts, who at the moment laboured under the affection. When once this disease takes root in a school, barrack, jail, or workhouse, it is always difficult to eradicate it; and, therefore, it behoved me to make known to the guardians, and the Poor-Law authorities, that, under the most favourable circumstances, and among persons previously healthy, even in the better ranks of life, it requires a great length of time, and the most watchful care, to get rid of its effects. Relapses are always of frequent occurrence in Ophthalmia; and, perhaps, from some cause arising out of the peculiar circumstances of the recent calamitous condition of this country, relapses were one of the most marked characteristics of the late epidemic of fever. If the British soldier, well fed, well clothed, accustomed to cleanliness, under strict discipline, previously in rude health, and supplied, not only with prompt medical assistance, but all the comforts and appliances of a military hospital, suffers for months from protracted Ophthalmia, and occasionally loses his eye-sight, how little need we wonder at the ravages committed by it among the miserable Irish peasant children.

The effects of the Ophthalmia may be gleaned from my letter to the Tipperary physicians; but upon the peculiar condition of the conjunctiva, technically denominated "granular lid", I may remark, that it is one of the most frequent sources of blindness among the lower orders in this kingdom, and is one of the most intractable diseases we have to treat. Whether it arises from the humidity of the climate, or the dirty habits and impoverished condition of the poor, it is not easy to determine; but I think more instances of it are to be found in Ireland than in any other country in Europe. It is also one of the causes of entropion, an affection of which there are more cases in Ireland, in proportion to its population, than can, I think, be found elsewhere.[1]

Of the 340 cases which I examined in the Ophthalmic Hospital, at Tipperary, I find, by referring to my notes, made upon the 12th of August, that sixteen persons, ten males, and six females, had irrecoverably lost both eyes, and that in two more they were on the point of being lost; thirty-two persons, twenty-three males, and nine females, had each lost one eye. In thirty-three cases, sixteen males, and seventeen females, one eye had been blemished (generally from dense leucoma, or cicatrix of the cornea, with synechia anterior), so as to impair, but

[1] Out of 512 operations performed at St. Mark's Ophthalmic Hospital during the last three years, 62 were for entropion and trichiasis.

not altogether destroy, vision; and in six cases, three males, and three females, both eyes were in a similar condition;—eighty-seven in all of those submitted to my inspection, where one, or both eyes, had suffered to a greater or less extent. I saw, however, some other cases, in an advanced stage of the disease, where mischief must inevitably have ensued since. Whether these eighty-seven are the entire number of persons, out of the 2068 treated, in whom complete, or partial loss of vision has occurred, I have had no means of judging, as some children had been removed by their parents during the spring; but, if they are, I do not think the number at all remarkable. We all know, that in some instances of violent inflammation of the eyes, even under the most favourable circumstances, it is not possible by art to preserve the integrity of the organ; and twenty cases of total loss of both eyes, or 1 in every 103, is, I think, rather a favourable result. Will medical statistics afford a more favourable? Do 102 cases out of every 103 of inflammation of the lungs, pneumonia or bronchitis; or of peritonitis, etc., etc., recover? Of those persons, where both eyes are, for the present, deprived of sight, but not irrecoverably lost, or disorganized, several may, in process of time, have operations performed with a fair hope of obtaining a moderately useful vision; but this will much depend on the improvement of their general health, and their being removed to a more genial atmosphere.

In addition to the foregoing statistics, the materials for which were collected by myself, the assistant-physician informed me that one hundred and forty-three adults had suffered from Ophthalmia since October 1849; they were chiefly delicate females, and some of the ward-maids and attendants. I have also been informed that, previous to the 29th of October 1849, twelve people, eight males, and four females, were absolutely blind; but they did not come under my inspection.

There prevailed an opinion among the officials, both in Tipperary and at Athlone, that in several cases the Ophthalmia had been induced by malingering; the boys wishing to be freed from school, and to get a better class of food. But, upon strict inquiry, and cross-examining the persons who were said to have first propagated the report, I did not find it borne out by their answers. A few cases of it may have occurred; but it certainly did not prevail to any extent. The means by which the boys in the Athlone Union were accused of propagating the disease—washing the eyes with urine—is, I know, a popular "cure for sore eyes" among the lower order of Irish, particularly in Connaught.

The great bulk of the patients in the Ophthalmic Hospital having contracted the disease in the male and female schools of the union, I next inspected these establishments, and fully reported to the Commissioners thereon; pointing out what I considered defects, and suggesting such improvements as the nature of the buildings admitted. Both the boys' and girls' schools are situated in the uncleanly, ill-sewered, and unhealthy town of Tipperary, which in 1841 contained 7370 inhabitants, and the average proportionate mortality for ten years was, as far as the records of the last census afforded the means of approaching the truth, 1 in 30·8. These establishments had been private residences; the rooms and out-offices belonging to which, together with some additional

buildings recently erected, were converted into schools: but taken as a whole they were, in a sanitary point of view, inapplicable to the purpose. In the boys' school, in Nelson Street, there were 107 children at the time of my visit; but as many as 370 had been located in this establishment shortly before. There was a manifest deficiency of space for exercise-ground for the children. This is an error, not only in a moral but in an economical point of view; for the guardians may rest assured that if a single acre of green-field, properly supplied with a gymnasium, and other suitable means for taking active exercise, were provided in the immediate vicinity of the town (at a cost probably of two or three pounds per annum), wherein the boys and girls of the workhouse schools could play daily, the males at one time, and the females at another, it would save them a large amount of expenditure in hospitals, medicine, and medical attendance. If the children of the rich, in our upper-class schools, require this, how much more do those poor, dispirited, and emaciated creatures, congregated together in masses, and deprived, by their unhappy circumstances, of the sympathy of their natural guardians, demand some such means of healthful recreation. The school hours are from ten to three. Three times a week, when the weather permits, the children are taken out for a walk upon the roads. The food and clothing, supplied to this establishment, were both very good; but neither can supply the want of pure air and active exercise. The chief dormitories were long, thatched apartments, each sixty feet by fifteen, and the walls eight feet high; but the ridge poles of the roofs were sixteen feet from the floor. The ventilation, heretofore provided in these apartments, was, to my mind, totally inadequate; but, shortly before the date of my visit, it had been greatly improved, by means of apertures, made in the side walls, and in the roof. As many as eighty boys have usually slept in each of these apartments; but I was informed that as many as one hundred and twenty-five had slept in a single room of the dimensions I have described. Upon inquiry, the schoolmaster informed me, that "the Ophthalmia *almost invariably attacked the children during the night time, and chiefly those who slept in these very apartments*". In the front house in Nelson Street, which was originally a private dwelling, and in which the apartments were consequently smaller, and much better constructed, with respect to warmth and ventilation, than those I have just described, I was informed that, "there had been but few cases of Ophthalmia". From the 15th of May to the 15th of August, one hundred and ten boys were seized with the epidemic in this school, and removed to the Ophthalmic Hospital.

The means provided for the boys to wash themselves were, it appeared to me, quite inadequate, not merely for cleanliness, but for the maintenance of health; but, as far as I have had an opportunity of judging, the appliances for ablution in the Irish workhouses generally are defective. I need scarcely wonder at the guardians and inspectors permitting the peasant boys in the Irish Auxiliary Workhouses to wash at a pump or with a bucket in the open air in all weathers, when I remember what was the condition of things not many years ago, at one of the largest schools for the gentry in this country—one too on "Royal Foundation". There were no means for washing provided in the large dwelling-house wherein the boys slept; but half-dressed, they scampered every morn-

ing, winter and summer, across an open court or play ground, to an out office, which had recently been a stable, and the floor of which was still paved. There, from fifty to sixty young gentlemen rushed at a large trough, like a manger, in which there were eight or ten basins, and struggled for a wash, and afterwards for the first, or at least a moderately dry wipe with about as many towels. In the Athlone Auxiliary Workhouse, matters were in a still worse condition in this respect, 354 girls and 38 little boys being submitted to the process of ablution, or more properly speaking, of *wetting*, upon an exposed and elevated part of the yard, each morning, on their way from the breakfast-room to the school-room. Every medical practitioner, every mother, every old woman, knows full well what the effects of such sudden chills are in producing inflammations. The children in our workhouse schools are, I believe, very well taught the national system of education, and it is highly gratifying to witness the order, discipline, and regularity which prevails there; but if, besides the marching and counter-marching which they are drilled into (all most necessary I admit), habits of cleanliness and comfort in the matter of ablution were also instilled into these children, would it not forward the process of civilisation in Ireland?

The girls' schools at Bank Place, also in the town of Tipperary, and then the chief source of the epidemic, I inspected and reported on; but in the previous statement and observations, will be found the substance of my report, so far as concerns the objects of this communication, or as the medical profession need be acquainted with. At Grenane, about a mile from the town, there is another girls' school, containing, at the time of my visit, 331 girls, clean, healthy, and in good spirits. There was a plentiful supply of water, the night-soil cart was removed daily, the dormitories, school-rooms, and the entire establishment, were in the highest order. Originally, when the disease first appeared, many cases of Ophthalmia were sent to hospital from this school, but latterly, it had almost disappeared there. The mistress stated, that the disease chiefly attacked the recently admitted children, but that, in several instances, the new comers presented symptoms of the affection on their admission.

The following is the letter which I addressed to the medical attendants of the Tipperary Workhouse, upon the 16th of August.

"Gentlemen,—Pending the presentation of my Report to the Poor-Law Commissioners, respecting the cases of Ophthalmia which I examined upon Monday last, the 12th instant, in the Auxiliary Workhouses of Tipperary, I beg leave to put you in possession of my views on the treatment which I think it would now be most advisable to adopt.

"Upon the first seizure, if the previous general health of the patient is such as might warrant it, I would strongly recommend slight local depletion, by means of a leech or two applied over the edge of the malar bone, immediately beneath the external angle of the eye, and repeated next day, if the strength of the patient permit it, or if the inflammatory action continue unabated. This refers to young children, the most frequent subjects of the disease. The number of leeches must be regulated by the age and strength of the patient. In adults, cupping the temple and drawing therefrom three or four ounces of blood, will, I think, be

found beneficial in mitigating the severity of the original symptoms. Where there is much swelling of the lids, cold applications are generally found most grateful. I highly approve of your judicious use of the nitrate of silver; but I would suggest the propriety of keeping a solution of that medicine in a separate vessel in each ward, and having it so managed as to exclude as much light as possible; for the dark precipitate thrown down by decomposition, gives, when applied to the eye, unnecessary pain, and it is far from beneficial. I see no objection to your employing a solution of this medicine as strong as six or eight grains to the ounce, in the very early stage, when the conjunctivæ of the lids becomes villous and pulpy, and pours out in great quantity a thin mucopurulent discharge, and when that covering the globe is raised up into a serous chemosis. But as soon as ever the symptoms of intense inflammation subside, I would lessen the strength to about three grains, or even one grain to the ounce. In cases, however, where you think it advisable to employ the weak solution, it ought, I conceive, to be used more frequently, say three times in the twenty-four hours. The nurses should be taught how to apply this remedy.[1]

"With the exception of some mild aperient, given at the commencement of the attack, in those cases where the tongue is white, or loaded, I do not think that much benefit is to be derived from purging the class of patients you have to deal with; neither do I see much good likely to accrue from lowering them by means of tartar emetic, the patients which will bear such being evidently the exceptions. If a warm bath can be easily obtained, I think good will ensue from its use; and, in the treatment of the subsequent chronic stage, I am sure you will find it very desirable; but it must be properly managed to be effectual.

"As soon as local depletion has been had recourse to, the bowels freed, the bath used, and the solution of nitrate of silver dropped into the eye, I should strongly advise you to administer cinchona bark, and give it liberally, particularly during the subacute stage.[2] The decoction, with a little of the syrup, will, I think, be the most easily obtained preparation, and the most applicable to a large institution.

"As far as the patients are willing to take it, I would recommend

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[1] Wherever in this Report recommendations are made, or suggestions offered, upon subjects of apparently trivial import, it is because some good reason for my doing so presented itself at the moment. It must be remembered, that the nurses and ward-maids of an Auxiliary Workhouse Hospital are themselves pauper inmates, generally very ignorant, and totally unacquainted with those matters familiar to the usual nurses of general hospitals.

[2] It has been asserted, with what degree of propriety the profession are to judge; that as inflammation of the conjunctiva, commonly called purulent Ophthalmia, in its simple and uncomplicated form, proceeds through its different stages to perfect recovery, unaided by any medical interference, we should refrain resolutely from any officious meddling with the disease, etc. How far this line of practice is applicable to inflammations in other organs in their mild uncomplicated form,—simple inflammation of the mucous membrane of the lungs, throat, bowels, or the genito-urinary organs, for instance,—those who are extensively engaged in practice are alone capable of forming an opinion. Every one who visits the continental hospitals has an opportunity of judging of the positive results of the *expectant treatment* in inflammatory diseases. Not long since, the profession witnessed the decay of a periodical wherein such doctrines were broached; and their promulgation now only proves that some persons have outlived all faith either in medicine or themselves.

plenty of nutritious food, good wholesome bread and milk, or stirabout and milk, as well as some broth containing fresh vegetables, during the day. In the treatment of these cases now in hospital, as well as in the regulation of the dietery of the schools where the disease has been acquired, I would suggest to you the propriety of varying the description of food from time to time. Properly cooked potatoes, instead of the usual meal of brown bread, would, I am sure, be considered a luxury, and tend to keep the children in good health. Although the patients in the Ophthalmic Hospital may, from its sweetness, prefer tea to milk, I would not recommend you to accede to their wishes generally, but I think the use of cocoa, made of a proper strength, and given with an equal proportion of warm milk, and some sugar, would be both palateable and nutritious.

"From what I saw of the disease, and from the account which you have given me, it is manifest that it is, in the first instance, amenable to treatment; few cases having occurred in which the cornea sloughed, or the eye burst, through the violence of the primary attack. The great majority of cases in which permanent or irreparable mischief has occurred, seem to be those in which the cornea ulcerated, and the iris protruded, subsequently to the original attack, producing either staphyloma, or extensive leucoma, with adhesion of the iris to the cornea. The treatment of such ulceration will, no doubt, greatly depend on the appearances presented in each individual case; but, as such affections are nearly always induced by some constitutional derangement, such other means of strengthening the system as circumstances will permit, must also be employed. Where the patient is much broken down, and the disease is in a chronic stage, I beg to suggest the plentiful use of cod-liver oil, of which medicine a large supply should be at once procured, and a table-spoonful given to each child two or three times a day. I saw, I am sure, fifty cases, among those under your care, which would be greatly benefited by the use of this remedy. It is most applicable to those cases in which there is much emaciation, paleness, a cold clammy skin, and large flabby granulations, and sometimes transparent ulcers of the cornea.

"As the great tendency of this disease is to cause exuberant growth of the conjunctiva, presenting various kinds of granulations, which form the sequelæ of the affection, I would advise you in every instance, as soon as the swelling of the upper lid has subsided, and the more urgent symptoms have passed away, to evert the lid in order to examine the state of its conjunctival lining, and to apply the solution of nitrate of silver directly to that part, and then, by keeping the lid thus retained for a few seconds, until the caustic has acted upon the swollen villous surface of the membrane, granulations may be prevented from forming.[1]

[1] To evert the upper eyelids, in order carefully to examine the diseased conjunctiva, and to apply suitable remedies, in some hundred cases once a day, or even every second day, in addition to the ordinary attendance necessary upon a large workhouse, requires an amount of time which few medical men could give, or the Board of Guardians would be willing to pay for. Still it was my duty to point out what I conceived to be necessary; but, at the same time, I recommended the Poor-law Commissioners to advise the guardians to furnish additional medical attendance.

" With respect to the local treatment of the ulcers,—several of which were transparent, as if a piece had been chipped out of the cornea,—I would recommend you to touch them with a solution of nitrate of silver, of the strength of about four grains to the ounce, applied with a fine camel-hair pencil. These ulcers seem to me to penetrate the cornea from want of power, in the neighbouring parts and the constitution generally, to repair the mischief, few, if any of them, presenting the usual vascular connexion with the adjoining conjunctiva and sclerotic, which is commonly set up to restore the breach. I saw several instances in which the cornea had just been ruptured, and a small portion of the iris protruded. These cases, if allowed to proceed unchecked, will inevitably go on from bad to worse. The aperture in the cornea enlarges, and a considerable portion of the iris protrudes, and the final result is either partial or complete staphyloma, or an extensive leucoma, the whole or a large portion of the pupil becoming attached to the cicatrix. In such cases, I would recommend that, as soon as you perceive that the ulcer has penetrated, you should touch the knuckle of protruding iris with a very fine brush, wet with a weak solution of nitrate of silver, and immediately afterwards drop into the eye a solution of atropine, of the strength of two grains to one drachm of distilled water.[1] The eyelids should then be fastened down with narrow strips of adhesive plaster, and a piece of fine lint plentifully smeared with a moistened extract of belladonna should be applied over the eye, and retained in this position by a light bandage. From the crowds at present in your hospital, and the liability of cases so circumstanced meeting with any accident, I would recommend to have them confined to bed. The eye should not be opened for the next four days ; but, as the lint becomes soiled and stiff with the discharge, it may be changed as often as necessary, and fresh belladonna applied round the orbit.

" In cases where ectropeon of the upper lid has taken place during the violence of the original inflammation, great care should be taken to restore the lid to its natural position, as it sometimes remains in a most distressing condition for weeks, and even months, of which, at present, you have some examples in the hospital.

" The foregoing observations refer to the more active forms of the

[1] The treatment recommended above I published in my Ophthalmic Report for 1848 (see *Dublin Quarterly Journal*, vol. v, p. 489). Since then, I have had many opportunities of testing its value ; and the pupils in attendance at the Ophthalmic Hospital have frequently witnessed its efficiency during the last few months. To state that belladonna or its alkaloid will not cause a knuckle of iris protruding through a recently opened ulcer or rent in the cornea to retract, and the pupil to expand, exhibits a want of practical knowledge of ophthalmic surgery. It is to be regretted, I think, that atropine, one of the most powerful salts, and one of the most efficacious remedies with which we are now acquainted,—far more cleanly and much more certain than belladonna,—has been omitted in the recently published Dublin Pharmacopœia. Since I first brought the use of this remedy under the special notice of the profession in this country, I have found that, in some cases, a single drop of a solution of the strength of two grains to a drachm, consequently about the thirtieth part of a grain of atropine, will, if dropped upon the conjunctiva of the lower lid, be perceived, by its bitter taste in the mouth, in a quarter or half-an-hour after its application. Where it has been necessary to use this remedy for some length of time, as in cases of contracted pupil, or central cataract, etc., an unpleasant dryness of the fauces is experienced, in addition to the usual bitter taste. Isinglass plaster, made on firm sarcenet, is preferable to the common sticking-plaster for fastening down the eyelids.

disease. I have now to give you my opinion of the chronic cases, which form the great majority of those submitted to my inspection. In the observations which it is my duty to make, and the recommendations which I suggest for the removal of those errors which it appears to me have been committed, and still exist in the general management of your ophthalmic hospital, I beg to state that I am well aware that it is not within your power to rectify them. Their removal I will strongly impress on the Commissioners, but, at the same time, it is proper you should always bear them in your recollection. The wards of the hospital are much too low, and far too many patients are crowded into them. The ventilation is both irregular and inadequate. The clothing of a great number of the children is insufficient. During the approaching cold weather, some means for heating the wards must be procured, and the unglazed windows must, in inclement weather, be properly secured. Cleanliness is not sufficiently attended to; three sponges are not enough for a ward containing nearly one hundred patients; there should be at least a dozen sponges, and the elder children should be shown how to use them themselves, and compelled to do so several times a day.[1] For the recent cases, where the discharge is believed to be infectious, I would recommended the use of small portions of tow instead of sponges, as a fresh supply of the former could be had daily at a very small expense. I do not think three night buckets sufficient for the number of patients in each ward; there ought to be at least five or six. The removal of excrementitious matter, and the cleanliness of the privy, has not been sufficiently attended to; you should insist on having the ordure cart removed daily. At the time of my inspection, the bedding, particularly the sheets, were not so clean, and consequently not so healthy, as you are aware they ought to be.

"I will strongly urge upon the Commissioners the necessity of immediately procuring some country place to which the ophthalmic patients may be removed, and where they will have a constant supply of fresh air, and be able to take open air exercise (if possible, in a green field, instead of a confined yard); without which means, neither medicine nor any effort on your part will prove available in a great number of cases.

"I would suggest the advantage, both to yourselves and the patients under your care, of making some classification of them according to the severity of their symptoms, and thus prepare the way for lessening the number of children in the establishment. I saw several patients with slightly granular lids and some mucous discharge from the eyes, but without any active inflammation of the conjunctiva of the globe or any intolerance of light, who might at once be removed, if a proper place were provided for them. As the disease is not likely to be infectious in that state, they might be sent to the parent workhouse or back to school, provided they were not confined, nor employed in learning five or six hours a day, which I find is the time the children have been occupied in the schools where the disease was originally contracted. In treating those mild forms of chronic Ophthalmia, I think you will find it bene-

[1] I think we are in the habit of allowing patients with inflammatory affections of the eyes to *slop* too much, either by steeping, or keeping on a wet rag for hours together. I am convinced that much greater benefit will be derived by fomenting the eye properly, or applying a cold lotion by means of a fold or two of fine linen for a quarter of an hour at a time, and then carefully drying the part.

ficial to use the wine of opium made without aromatics, and mixed with an equal quantity of laurel water, dropped into the eyes once a day.[1]

"Chronic Ophthalmia, kept up by a granular condition of the conjunctiva of the lids, chiefly the upper, is now what you have principally to treat. By making the following classification, and by getting a registry constructed in accordance with it, you will, I think, be able to get through your work more easily. If, moreover, each class could be kept in separate wards, it would, I think, hasten their cure. Until another house is provided, the present large wards might be divided by temporary partitions.

"Class I. All the recent cases, before they have passed into the chronic form. They should, if possible, be at the top of the house.[2]

"Class II. The totally and irrecoverably blind. These had better, I think, be separated from the rest of the patients.

"Class III. All those with ulcers of the cornea, protrusions of the iris, or staphyloma not producing blindness. In recent cases of staphyloma of the cornea projecting through the lids, and causing much irritation, I would recommend you to tap the protruding part with a flat needle every now and then, so as to lessen its bulk and remove the pressure made by the contained fluid. A light pad, made to exercise some degree of pressure on the eye, while this mode of treatment is being adopted, I have known to prove beneficial. In all cases of recent adhesion between the cornea and iris, I would recommend the continued dilatation of the pupil by means of atropine or belladonna. In cases where complete closure of the pupil exists, but in whom the operation of artificial pupil may hereafter be resorted to with some hope of success, equal care, both to improve the general health and to remove any disease existing in the eyelids, should be taken as in those already described.

"The first and third classes should be visited daily, the second but every third day.

"Class IV. With small hard granulations, generally distinct and separate. These I would recommend to be touched in the manner I pointed out to you every second day, with sulphate of copper; they need not be examined upon the intermediate days. The constitutional treatment, by means of bark or cod-liver oil, should be employed in several of these. Where there is much intolerance of light, irritation of the membrane of the external nares, and swelling of the upper lip, with other strumous manifestations, I would recommend you to use, in connexion with the bark, very minute doses of the oxymuriate of mercury, say the sixteenth to the eighth of a grain. Such cases will also be benefited by the application of a blister to the vertex; but blistering, in the generality of cases, such as those I witnessed in your ophthalmic hospital, will not, in my opinion, prove beneficial. I do not think the usual bitter infusions, or even hydriodate of potash, improve such cases, or indeed many cases of ophthalmia in young persons; but some benefit may be derived from the use of the syrup of iodide of iron, particularly in very young children.

[1] The removal of the hot spices from the wine of opium is, I find from long experience, a great improvement, when this tincture is used as a collyrium. This formula has, I am glad to find, been adopted by the compilers of our new National Pharmacopœia.

[1] The treatment of these recent cases has been described in the commencement of this letter.

"Class v. With large distinct granulations, such as those you saw me remove, and which principally congregate at the sulcus, formed by the reflection of the conjunctiva from the upper lid to the globe. These cases should be seen and their lids everted daily, and as many of the granulations as possible cut off with a curved scissars. The inner surface of the lids may occasionally be scarified slightly, and the bleeding, which will prove rather beneficial, should be encouraged by fomentation with warm water. Besides the removal of these large granulations, some local astringent should now and then be employed as the granulations disappear, such as the sulphate of copper, solution of nitrate of silver, or the acetate of lead, which latter I shall presently allude to. The constitutional treatment of such cases is even more necessary than in the foregoing class. From week to week, cases of this and the 4th and 6th classes may be removed into the 7th class, which will not require such constant attendance.

"Class vi. Are those in which the conjunctiva presents an uniform granular condition, the surface of the granulations, however, being tolerably smooth, although they may be separated by passing a probe between large packets of them. They are generally less florid than in the preceding class, and the patients are always run down in health. They will require an energetic constitutional treatment, with as much animal food as the dietary of the institution will permit. Ulceration of the cornea exists in a great number of these cases, presenting the appearance of an abrasion of its surface without any surrounding greyness. The local treatment which I think you will find most beneficial in these cases, is to unload the deeply congested purple granulations by very light scarifications, and, in a day or so afterwards, to apply finely levigated acetate of lead. For this purpose the lids should be everted, their internal surface gently dried, and the lead applied either with the top of the finger, or a camel's-hair pencil, so as to completely cover over the exposed surface. The lid should be still held firmly everted for at least a minute, during which time the lead will have dissolved, and the granulations will have changed colour very considerably, assuming the hue of an unripe mulberry. The parts should then be washed free of the application with a little clean water, either by means of a syringe, or a sponge. It will not be necessary to examine these lids again for three days. As there is an opinion that lead is deposited, and leaves a permanent stain, where there is any breach of surface in the cornea, perhaps it would be as well to confine this application to the cases where ulceration does not exist, using the solution of nitrate of silver, applied after the same manner in those where ulceration is present. After one or two applications, the lead will form a sort of enamel, of a whitish colour, and of great smoothness, over the surface of the lid. As long as this is present, it should not be interfered with, nor the remedy re-applied, except to such spots as it has not taken effect upon.[1]

[1] This mode of applying finely powdered acetate of lead to the hypertrophied villi of the palpebral mucous membrane has been highly recommended by Dr. Buys, a Belgian military; surgeon and the results of his observations have been published at length in Dr. Cunier's excellent journal, the *Annales d'Oculistique*. A form of Ophthalmia, very similar to that now prevailing in the Irish workhouses, has recently spread among the troops in Belgium, and also extended through the public institutions, and among the lower orders in that country; on which several valuable reports have been published in the periodical alluded to. The action of powdered

"CLASS VII. Are those with simple uncomplicated chronic Ophthalmia.

"I would, as soon as proper accommodation and other means are supplied by the Poor Law guardians, or the Commissioners, completely separate all those who are totally and irrecoverably blind from the rest of the patients. As soon, also, as possible, some description of amusement should be procured for the children, who should be kept upon fine days as much as possible in the open air, or in a large airy day-ward in wet weather. Fortunately, there being so little intolerance of light in the great majority of the cases your hospital presents, the children will always be able to do this. I have been very much struck with the circumstance of there being so little development of scrofula in the children affected with the present epidemic Ophthalmia in Tipperary; only two or three instances of enlargement of the glands of the neck presenting in 350 patients; a fact of some interest, as tending to show the purely epidemic nature of the disease, and to distinguish it, even in the chronic form, from that generally denominated Scrofulous Ophthalmia. It also appeared to me remarkable that only one or two instances of Pannus, or vascular cornea, such as that which so frequently occurs as the consequence of Ophthalmia in the army, were to be seen in the vast number of cases under your care, and in several of which sufficient time had elapsed to permit of the formation of such appearance. This circumstance, I think, tends to show the asthenic nature of the disease you have had to treat, and the broken-down class of subjects in which it has appeared. Extreme coldness of the end of the nose is a symptom which I have long observed to be attendant on chronic Ophthalmia with granular lids, in debilitated patients, and it was to be observed very frequently among the children in your Ophthalmic Hospital.[1] To such cases the cod-liver oil is peculiarly applicable. The total absence of all other ophthalmic diseases, except the purulent Ophthalmia, and its consequences, was most remarkable; and the circumstance is fortunate, as, had the internal structures of the eye partaken in the inflammatory action, the disease would have been less under control, and the usual remedies, mercury in particular, inapplicable to the class of patients you have had to deal with. Of pustular Ophthalmia, so common at present among children and young persons, I did not see a single instance either in the hospital, or among the numerous pupils, males and females, whom I saw in the schools.

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acetate of lead is not the same as that of the liquor plumbi, even in the undiluted state. Even though it were, the mode of applying it would produce a different result. Every one engaged in Ophthalmic practice knows full well that any fluid caustic, or astringent, simply dropped into the eye with the palpebræ, generally at the moment spasmodically contracted, exercises but little influence on the inner surface of the upper lid. To prove effectual, the substance, fluid or solid, must be applied to the membrane itself.

[1] Coldness of the extremity of the nose is an attendant symptom of chronic Ophthalmia; just as much as congestion of it is characteristic of affections of the choroid or the internal structures of the eye; or swelling, redness, and an eczematous eruption, of the external nares, the septum, and the upper lip, is a constant attendant on certain forms of scrofulous Ophthalmia. To deny such, exhibits either defective vision, or undeveloped powers of observation.

In several cases at Tipperary, enlargement of the pre-auricular gland—*Bubon. pre-Auriculaire*, first noticed by Dr. Hairion, of Louvain, is an attendant symptom in gonorrhœal Ophthalmia, was observed. But, as we already stated elsewhere, it is common to other forms of ophthalmic inflammation besides the specific.

"As the yard of the present establishment is so confined, I would strongly suggest the propriety of sending forty or fifty patients, under the superintendence of a proper care-taker, to a little distance into the country every day. Two hours of freedom in some of the neighbouring green-fields daily would be of great benefit to the poor children cooped up within the narrow limits of the hospital, and would be an eventual saving to the guardians and rate-payers in the items of medicine, medical attendance, hospitals, and the subsequent permanent support of a number of blind people. There are several patients in your hospital whose sight might be saved if they were completely removed from the establishment, and placed under the care of their friends in the country. But this is a matter on which I do not possess sufficient information to be able to suggest any decided step. If, upon the breaking up of your present establishment, and the removal of the patients to a more healthy locality, you could by any means get rid of the fleas which swarm in the beds, and literally cover the sheets with minute specks of blood, it would, I think, tend to improve the health, and minister to the comforts of the miserable patients you have to treat.

"As it will be necessary to examine each individual case of the 350 now under treatment, to evert the eyelids and apply the necessary remedies, as well as prescribe medicine, and regulate the dietary, once in three days at least, and in some cases daily, I will recommend the Commissioners to afford you additional medical assistance as soon as possible. Until, however, some more healthy locality, with sufficient ground for enabling the children to take exercise, is supplied, I do not think any general improvement will take place in those under your care."

Dublin, 16th August, 1850.

OPHTHALMIA IN THE ATHLONE UNION.

In accordance with the directions of the Poor-Law Commissioners, I proceeded to Athlone upon the 23rd of August, and, in company with the physician and the master of the workhouse, I visited the different localities where I was informed that patients labouring under Ophthalmia existed; and also carefully inspected the schools, where the disease is said to have originated. As the remarks, which I thought it my duty to make upon this disease, its apparent cause, and its treatment in the Tipperary Union, were equally applicable to the circumstances of the Athlone Workhouse, I did not consider it necessary to extend my report upon the latter to the same length as the former, but contented myself with pointing out what I considered the most striking defects in each section of the auxiliary workhouses; and I also "suggested to the Commissioners the expediency of furnishing copies to the officials at Athlone, both of my letter to the medical attendants of the Tipperary Union, and also of my general report" thereon. I pointed out, in as strong terms as language at the moment supplied me with, what I considered to be manifest defects in the warmth, ventilation, cleanliness, mode of washing, and the general accommodation of the several establishments through which I was conducted. It appears, from the public prints, that the Board of Guardians at Athlone have been put in possession of my opinions and suggestions; to what extent they have availed themselves of these I know not, and, except for the sake of humanity and the credit of my countrymen, it concerns me not to inquire.

At the time of my visit, the disease or its effects were to be observed

in the girls' school, in a temporary hospital, in the boys' school, and in the Infirmary, and the Fever Hospital, these latter being within the precincts of the parent workhouse. The first of these establishments, denominated No. 1 Auxiliary Workhouse, had formerly been a private residence; it contained 354 females under fifteen years of age, and 38 males under five, who were in an infant school attached thereto. Upon inspection, I found that numbers of the children here laboured under the Ophthalmia in a chronic stage; some, the very young children particularly, were just as severely affected as those in the hospital at Tipperary, the same peculiar effects exhibiting themselves, in exuberant growths of the lining membrane of the lids, etc.; but ulceration was not so common. Upon these effects and the best method of treating them, I consulted with the medical attendant, Dr. O'Connell, who accompanied me in my visit. The matron of the establishment had been supplied with a bottle containing a solution of lunar caustic, and she seemed to have been well instructed in the method of applying it; but I believe it will be conceded, that, in order to arrest the progress of this disease, and to counteract its effects in a chronic stage, it is absolutely necessary that a medical inspection of a great number of the children of this or any other school, when it prevails, should be made every five or six days at least, and their eyelids everted, in order carefully to examine the state of the conjunctiva, and to employ such remedies as may be deemed advisable at the time. Those labouring under severe chronic Ophthalmia with granular lids, I recommended to be separated from the others. Several of the cases here seemed to me to require active constitutional treatment, in order to correct the tendency to relapse, and to assist in eradicating the disease from the establishment.

Generally speaking, the girls in the Athlone School appeared to be much more healthy than those either in the school at Bank Place, or the Ophthalmic Hospital of Tipperary. Moreover, very many of them were of a somewhat different race, having dark eyes and complexions, and consequently presenting fewer instances of the deleterious effects of ocular disease.

All forms of external Ophthalmia seem to affect light-haired people with blue or grey eyes and delicate skin, and particularly those with what are termed sandy complexions, more than those with dark complexions and brown or hazel eyes; and such diseases likewise produce, in the former, more violent symptoms. Of 1659 cases of external inflammation, including conjunctivitis in different forms, pustular, catarrho-pustular, strumous, and purulent Ophthalmia, etc., registered at St. Mark's Hospital during the last three years, and in which the colours of the irides were accurately noted, 1155 were light-coloured, grey or blue; and 504 brown or hazel; being in the proportion of about 9 to 4. It must, however, be borne in mind, that light-coloured eyes, the blue-grey in particular, predominate in this country. The most marked difference occurred in the cases of pustular Ophthalmia, where there were 272 light, and 152 dark coloured; and in strumous Ophthalmia, generally marked by intolerance of light, etc., there were 267 light-coloured, and only 107 brown or hazel eyes.[1]

Forty-nine children in this school had, at the time I visited it,

[1] See Fourth Report of the St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear. Dublin: Alex. Thom. 1850.

suffered severely from the effects of the Ophthalmia, but in only two instances had both eyes been irrecoverably lost; two more had both eyes seriously injured, but in these latter, vision may in time be restored by operation; twenty had each lost one eye; twenty-three had each one eye seriously injured; and two had slight opacity of the cornea. In passing, however, through the school, I observed very many children with chronic Ophthalmia and a villous or granular state of the lids. It would appear that the disease had been, in the first instance, even more violent than in Tipperary; but, perhaps from the difference of race, the better state of the general constitution of the children, and the more healthful situation of the school, the subsequent consequences—chiefly intractable ulceration, kept up by an impoverished state of the constitution—were not to be observed in No. 1 Auxiliary Workhouse in Athlone: but then it must be observed, that some of the worst cases had been removed to the infirmary of the parent workhouse. The epidemic appeared to be on the decline, only two cases having occurred there during the three days previous to my visit. I understand that the disease broke out among the paupers in the Athlone Union, in April 1848, instances being at the same time observed in the surrounding country parts, and in the town of Athlone; and that 470 cases of it had been treated in the Workhouse during the twelve months previous to last August.

Having pointed out, in my Report to the Commissioners, the defects of the various establishments at Athlone in which the disease had sprung up, or then existed, both in the dormitories and dining-rooms, and remarked upon the general management of these institutions, it is unnecessary for the purpose intended, here to recapitulate them: but, as some notice of the following circumstance has already appeared in the newspapers, I here transcribe from my notes what occurred, in the hope that the like neglect may never again be permitted. Upon inquiry as to the mode of washing the children, I was informed that the process was then going forward. Furnished with an umbrella, for it was raining at the time, I proceeded to the spot, and found two of the adult female paupers, each with a bucket of water before her, standing upon one of the highest and most exposed portions of the yard, and which commanded an extensive view of the adjoining river Shannon, and the damp, swampy ground beyond and around it. The children, according as they breakfasted, crept along an adjoining wall for shelter on their way to the schoolroom, which was at a considerable distance; and as each child came up, one of the washerwomen laid hold of it, pulled down its dress in front and behind, and bending it over the bucket, threw some of the cold water with her hand upon the face, neck, breast, and shoulders of the little girl, and then gave her a scrub with the open hand. Sometimes the child escaped before the process was completed, and ran off with the water trickling from its hair and down its neck; in other instances, the children were dried with their own dresses. There were no towels there; and, upon inquiry, I found that but two had been supplied by the guardians for the entire establishment. The matron and the schoolmistress, who were present, and who were exceedingly intelligent, pains-taking persons, and apparently very humane, and anxious about the children, seemed quite unconscious of the deleterious effects likely to ensue from this mode of ablution and exposure of the body in the open air. I pointed out to the physician who accompanied me, the

great likelihood of such a chill producing Ophthalmia in weakly children already predisposed to it, and in an institution where it was manifestly an epidemic. The children should be washed and properly dried in some unexposed apartment, or their dormitories, immediately upon their rising in the morning, and not after breakfast.

No. 2 Auxiliary Workhouse, now used as an additional infirmary, was originally a malt-house, and is situated in a confined, damp situation, bordering the river, probably in order to facilitate the germination and fermenting process of the corn. From the construction of the building, its low vaults, narrow passages, and very scanty rooms, I conceived it to be totally incompatible with the maintenance of health in any persons confined within it. It was, moreover, in some parts exceedingly uncleanly. I suppose we must attribute to apathy and indifference,—consequent upon familiarization to scenes of misery and destitution—the circumstance that the guardians and the inhabitants of Athlone generally suffered such an establishment as this to exist. The patients in this hospital were chiefly cases of dysentery and Ophthalmia. Of the latter, there were fourteen; and of these, eleven boys, aged from 8 to 13, presenting the worst cases which I witnessed any where, miserable-looking creatures, squalid and ragged, slept on boards laid directly on a damp floor in a sort of cellar or dormitory 33 feet long, 10 broad, and 7 high, with unglazed windows facing a yard surrounded by high walls, and only 25 feet square. This inclosure was the exercise-ground for these and about twelve other boys located in the same establishment! These are defects in an institution intended for the improvement of health which, it seems to me, a medical man sent to inspect, is imperatively called on, both in justice to the inmates and to the authorities, fully to describe. Of the eleven boys in this apartment, three had lost both eyes, three had lost one eye each, and the remainder had one or both seriously injured. In such cases, medicine can be of no avail; I therefore strongly recommended that they should be removed to a more healthy locality, and that all the boys in this establishment—numbering about thirty-three—should at once be sent to some auxiliary house in the country, or as many as possible taken into the infirmary of the workhouse. In making a selection for this purpose, the curable cases alone should be removed, as it would be unfair to occupy a bed with an irrecoverably blind patient to the exclusion of one who had still an eye to lose.

I visited the boys' school at the Workhouse, and was informed that no fresh case of Ophthalmia had occurred among the children there for three weeks; several, however, had slight chronic Ophthalmia, and of seventeen whom I had subtracted from the rest as having suffered from the recent epidemic, two had lost both eyes, and seven, one each. The remainder had impaired vision in one or both; but it was stated that some of the children with blemished eyes, both here and at the girls' schools, had had Ophthalmia at their own homes, and had been received with blemished eyes. These boys did not look as healthy as the girls I have just described, and this school presented a much greater proportion of the fair complexioned. The clothing was insufficient; but the sleeping apartments of these children were clean, comfortable, airy, and in the highest order, which will, I think, account for the comparatively few cases of Ophthalmia which have occurred in this school.

In the Fever Hospital, there were several suffering from Ophthalmia in all its stages. Of twelve girls, two had irrecoverably impaired vision of the right eye; four boys had each lost one eye, and two others had extensive leucoma of one eye. Two adults had each lost both eyes. In the infirmary, there were twenty-one cases of Ophthalmia more or less severe; three of these had each lost one eye.

The epidemic seemed upon the decrease. There was but one recent case of severe purulent Ophthalmia at the time of my visit. Upon examination, the inside of the upper lid was found to be covered with an adventitious membrane of recently organized lymph, such as that which other mucous surfaces pour out in the early stage of excessive inflammation—in croup and diphtheritis particularly, and probably in dysentery also. In cases of suppuration of the eyeball, I have seen it formed over the entire surface of the chemosed conjunctiva in the space of twelve or fourteen hours, and so firm and extensive as to permit of its being taken off *en masse* with a forceps. The existence of this pseudo-membrane, particularly in the Ophthalmia of new-born infants, was pointed out some years ago by M. Chassaignac. A similar appearance has been observed in other epidemics of Ophthalmia in different parts of Europe and in Egypt, and it was very manifest in the severe Ophthalmia which recently prevailed in Belgium. I think it should be removed as soon as possible with a camel's hair pencil, and the surface then washed over with a strong solution of nitrate of silver, a practice which proves so beneficial in certain inflammations of the pharynx.

The physician agreed with me in the propriety of the treatment which I recommended, and which was nearly the same as that pointed out in my letter to the medical officers of Tipperary; viz., slight local depletion in such cases as would bear it, the use of astringents, attention to the state of the digestive organs, and then supporting the strength and improving the general health by nutritious diet, pure air, and the liberal use of tonics, particularly bark and cod-liver oil. According to my experience, a couple of leeches, applied in the neighbourhood of the affected eye in a child, is not only much more effectual in arresting the progress of the inflammation, but also much less exhausting to the patient's general strength, than a large blister placed upon the nape of the neck or between the shoulders. When blisters are applied behind the ears, or in the immediate vicinity of the affected organ, as on the side of the cheek or the temple, they cause, in young children particularly, great irritation and restlessness, and often give rise to eruptions on the face, difficult to cure. It must, however, be remarked, that where leeching is to be used in many cases, it will require a larger staff of attendants than is generally allowed for Poor-Law Hospitals. The system of purgation is too liberal in many of our public institutions. In catarrhal or muco-purulent Ophthalmia in children in this country, the tongue is, upon the first accession of the disease, generally coated with a thick, putty-coloured exudation, through which the bright red papillæ stand up prominently; and the better state of health the child has been in previously, the more marked is this symptom. Hence, the well-fed children of the middle classes more frequently present it than those of the poor. In such cases, the digestive organs demand special attention. But we frequently meet cases among the lower orders where the tongue is quite clean from the very first, nay, is

often unusually florid, and these will not be benefited by purgation. In relapses, even among the most robust children, the tongue is seldom so foul as in the original attack. Where the Ophthalmia has suddenly —as in the course of a few hours—seized a person, the tongue is seldom much loaded. In Tipperary and at Athlone, the prevailing character of the tongue in those sub-acute and chronic cases which I inspected was either pale red, or like the surface of a piece of macerated liver.

Before I conclude this report upon the Ophthalmia in Athlone, I beg leave to append the following account of a similar epidemic which prevailed in the 31st Regiment, while stationed in that garrison, for which I am indebted to my friend Dr. Massy, the Assistant-surgeon of that corps. "The regiment suffered slightly from Ophthalmia at Manchester, and also after its arrival in Dublin, where we left all our cases of Ophthalmia. We reached Athlone in July 1848, but we had also several men in the ranks with tender eyes, and these I always thought it would have been well to have separated from the rest. At head quarters we had 730 men; and two detachments, one of 90, at Roscommon, and the other, of 50, at Lanesborough. Soon after reaching Athlone, Ophthalmia became very prevalent among the troops, and we had generally forty cases in hospital at a time. All through the winter its spread was very gradual; and as an idea was entertained that its existence was attributable to the men themselves, it is possible that sufficiently energetic means were not employed to arrest its progress. At least, so I believed. The men were constantly kept at their duty, and no precautions taken for separating those slightly affected and convalescent from the others. In the following spring, about May 1849, the disease had regularly got hold of the regiment, and then I suggested the propriety of inspecting the troops daily, when all cases shewing the slightest symptoms of the disease were at once taken into hospital, and all the convalescents were placed in a detached barrack, apart from any communication, even indirectly, with the other men; and as these latter got well they were drafted to their respective companies. All the men in the regiment were ordered to wash in separate vessels, and to use their own towels only, each man having two; and the sergeants and subaltern officers were held responsible for these regulations being complied with. Even with these precautions, the disease made such progress, that it was with great difficulty we could check it, and that was not fully accomplished until we were about to leave the locality, in the spring of 1850.

"We had many formidable exciting causes to contend with, besides the extent of the existing disease. Athlone is well known as a locality where Ophthalmia constantly prevails. Nearly every regiment quartered there, for many years past, appears to have been affected with the disease. I believe the main cause of its prevalence there depends upon the great exposure of soldiers at night-time, mounting guard on those cold, bleak, unprotected positions upon the batteries and lines adjoining the bank of the River Shannon. The atmosphere is the dampest that I ever experienced, except, perhaps, in India, during the rains. The cold damp wind, coming down off the lake and the bogs at night, used to give the men Ophthalmia as if *struck* by the disease.[1] I have seen

[1] One of the men invalided from the 31st regiment told me to-day, that he went on guard perfectly well at twelve o'clock at night, and was unable to remain on his two hours, his eyes had become so much swollen and so gravelly.

four and sometimes six men come off guard into hospital, with severe conjunctivitis, who had mounted guard perfectly well. I know not if you are aware that soldiers' guard-rooms are about as small as they well can be; and that, when a sentry is relieved, he goes into the guard room, where he and his comrades lie down, in their great coats, altogether, huddled as close as possible. They shut the doors and windows, and light a large fire; and are, consequently, almost stewed. Then, when it comes again to their turn to go on sentry, they change *at once* from this great heat to a two hours' watch on the lines, exposed to the cold damp wind I have described. I am satisfied that it is this atmospheric influence, and this sudden transition, that produces Ophthalmia at Athlone, for many reasons. One will suffice. The Scotch Greys were quartered there with us, as also a battery of Artillery. These were both replaced by the 4th Light Dragoons and another battery of Artillery. Now, the men of these corps are similar to ours in every respect; they were quartered in the same barrack, and had the same rations, etc.; but they had not a single case of Ophthalmia among them; I believe because they never mounted guard as our men did. I do not believe that the disease was produced by the men themselves. Some of the best soldiers we had were attacked with it, and many of the bad ones escaped. From July 1848 to March 1850, 430 cases were admitted into hospital. Only one man went blind with both eyes. He had violent purulent Ophthalmia; and, in spite of the most active means, lost his sight in twenty-four hours. Four lost one eye each. Two of these were invalided, and two are still in the regiment; and twelve others were sent to Dublin, with chronic Ophthalmia, granular lids, opacities of cornea, etc., and were invalided in consequence. During the two years that we were quartered at Athlone, only two men upon the out-stations were attacked by the disease. They each lost an eye. I think you will allow that, out of 430 cases, for only one man to go quite blind, and four to lose one eye each, was fortunate. We were in the habit of making the men march three or four miles into the country every day, as soon as the acute symptoms had subsided, and we found no means more effectual in improving their health. We never confined them to bed, except in the inflammatory stage, and we gave them a generous diet, wine, and porter."

From this valuable communication we learn many useful facts, with respect to the exciting causes of the prevailing epidemic at Athlone, which will, I trust, be properly applied by those whom it may concern, civil and military. We likewise learn the fact, that in persons as healthy as soldiers, for whom every appliance and comfort is provided and the most judicious treatment employed, out of 432 cases, including those upon the out-stations, permanent mischief may result in seven, and twelve more be invalided; making nineteen in all, or one in every twenty-three, on the most moderate calculation.

It is no small satisfaction to me to find that the means which I recommended in Tipperary were immediately put in force, the guardians having, in a few days after my visit, procured suitable accommodation, and having had all the children labouring under Ophthalmia and its effects in the Meeting-house Lane Hospital removed to a country seat, some miles off. And in Athlone, the patients so miserably located in the Malthouse were forthwith removed to the parent Workhouse. In both localities the spread of the disease has, I understand, nearly ceased.

How far the disease has prevailed throughout the Irish Unions generally, I have no means of stating with any degree of accuracy; but I know that it has spread extensively throughout the south and west. At Limerick, in particular, I am informed by Dr. Kavanagh, it has spread extensively in the Poorhouse, and has also prevailed among the lower classes in the town, and in the neighbouring country. Upwards of 2000 cases occurred in the Workhouse and Auxiliary Workhouses of the Union since June last. It has likewise broken out in Kerry, at Tralee, and Dingle, and also at Kenmare. It has recently appeared in the Kilmallock Union, and in the Workhouse at Loughrea, as I have been informed by Dr. Lynch. Ballinasloe Union has also suffered from the epidemic. In Galway Poorhouse, Dr. Brown informs me, it broke out in June, so as to create alarm for its spread; and at the same time it appeared in the Auxiliary Workhouses of that Union, both of them situated in the country. It appeared chiefly among the boys and girls under fifteen years of age; and it was remarked that it never affected those who were labouring under dysentery. The disease was at its height in September, when 102 cases occurred. It has also prevailed slightly at Loughlinstone, near Bray.

What the exact number of persons may be, who have been totally or in part deprived of sight by this epidemic in our Irish Workhouses, I have no means of ascertaining; but I have addressed a letter to the Commissioners, enclosing a form for obtaining the desired information, which has been adopted. The returns which this circular will produce, together with the results of the Census about to be taken, will afford the true statement; and upon a subject of such importance, it is of great consequence that accurate statistical information should replace the loose assertions so frequently made, not only as regards this, but with respect to everything relating to this country.

It is quite manifest that, if the disease continues to spread, a great number of persons must, even with the greatest care and under the most judicious treatment, become blind. It cannot be expected that, in the impoverished state of this country, the friends and relations of such can receive them back into their homes; and it would scarcely be just to leave them in the hospitals and poorhouses. Some suitable asylum, where they will be properly taken care of, and educated according to their capacity, must, in process of time, be erected for their reception and maintenance. The last Poor-Law Act provides for such. At section XIV we read: "And be it enacted, that the Guardians of any Union may send any destitute poor deaf and dumb or blind child under the age of eighteen, to any Institution for the Maintenance of the Deaf and Dumb or Blind which may be approved of by the Commissioners, with the consent of the parents or guardians of such child, and may pay the expense of its maintenance there out of the Rates raised under the authority of the said first-recited Act." This, I believe, is the only country in Europe in which there is no general asylum for the destitute blind.

Dublin, December 1850.

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The Profession of Medicine does not hold, in the estimation of the public, the rank to which it is undoubtedly entitled. While medicine as a science has made rapid and gigantic steps, its professors have by no means reaped rewards proportionate to their meritorious exertions, and to their sacrifices on behalf of the community. While the sister professions of divinity and of law are upheld and defended in their rights and privileges by the strong arm of the legislature, and by codes of etiquette and of ethics self-imposed by those who constitute the legal and clerical bodies, the profession of medicine, which is inferior to no other in the extent and variety of its studies, or in the nobleness of its aims, is left to struggle in the best way it can with apathy, and sometimes with contumely from without, and with angry dissension from within. This state of things has long been recognised, and has frequently been deplored: but although innumerable remedies have been recommended to counteract or to remove the growing evils of our condition, a cure still seems far distant: for while each one who has applied himself to the task has found it easy to point out the fallacy of plans advanced by others, no one has been able to propose an effective substitute. In the present condition of the profession, it appears to us that self-reform is needed as a prelude to legislative enactments. Before the legislature can act with efficiency, so as to satisfy the expectations of individuals and to protect and benefit the public, and before the corporate bodies can so liberalize their policy as to consult the hopes and wishes of the mass of the profession, it is absolutely necessary, in our opinion, THAT ITS MEMBERS SHOULD BE UNITED AMONG THEMSELVES; that they should lay aside their petty jealousies and party struggles for pre-eminence, and apply themselves with one heart to the great preliminary work of effecting a MORAL REFORMATION. While, therefore, we

fully admit the necessity of Reform in the Medical Corporations, and while we profess our wish and our determination to struggle for obtaining from the Legislature a recognition of the just claims of the many, we nevertheless most strongly recommend that the progress of reform should be from below upwards; and we feel convinced that by harmony and union—by honourable and continuous exertion—by individual and collective attempts at internal regeneration—the progress of improvement, though tranquil, will be so irresistible, that neither the Legislature nor the Corporations will be able to refuse compliance with demands justly made, and respectfully urged. But while ignorance, quackery, and folly, still (and we speak it to our shame) disgrace our noble profession, how can we command the sympathies of the public, or induce the Legislature or the Corporations to listen to our complaints, or redress our wrongs? We therefore conceive that the opening of a new year affords an appropriate opportunity for offering some remarks on Medical Ethics.

The sentiments which we shall profess, and the views which we shall advocate, are those which this Journal has, from the commencement of its existence, consistently maintained. We shall continue to enforce the adoption of a lofty tone of morality in our intercourse with our brethren and with the public at large; we shall, as far as lies in our power, give honour to whom honour is due, irrespective of rank, fame, or position; and we shall hail with joy any attempt to introduce wholesome reform, from whatever quarter it may come—

"Tros Tyriusque mihi nullo discrimine agetur".

The publications, of which we have prefixed the titles, are all devoted more or less to the consideration of the subject of Medical Ethics, or in other words, of the mutual duties and obligations which the members of the Medical Profession owe to their brethren, and to the community at large. The first work which stands on the list is a most useful and valuable essay upon this subject, written by a transatlantic physician, and edited in a very creditable and judicious manner by our countryman, Dr. E. Bentley. The Transactions of the American Medical Associations are highly interesting, as showing the praiseworthy efforts which are being made by our brethren in the New World, to harmonize the conflicting and discordant elements which constitute the Medical Profession in that quarter of the globe. From the perusal of these Transactions, it is somewhat consolatory to discover that, however much we may lament the condition of our profession in the British Empire, things are still worse in the United States. We find that complaints are made of the inefficiency of the education of medical students, of the general absence of sound preliminary instruction, and of the laxity of the examinations for degrees in medicine and surgery; and we find complaints exactly similar to those made in our own country against the prevalence of quackery in its various forms, and denunciations of practices which, although adopted by persons within the ranks of the profession, are nevertheless inconsistent with the character of honourable men. To remedy these evils, associations have been formed in various parts of the United States; and, in a spirit of hearty co-operation, we emphatically wish them success in their laudable endeavours.

But, instead of analysing the contents of the volumes now before us, it is our intention to offer some remarks founded upon a perusal of their pages, and which we believe to be imperatively called for by the circumstances of the present day. Although our remarks are intended for all, it is yet our object in the present article to address ourselves more particularly to the younger members of the profession. It is from the present generation of students that the practitioners of future years must arise, and it is impossible to overrate the importance of an early adoption of sound principles of thought and action.

We cannot omit to notice, in the first place, the heavy responsibility which is incurred by the medical practitioner, and the necessity which exists, that he should be a moral and religious man. But, besides these qualities, there are others hardly less requisite; he must cultivate all the gentler feelings of the human breast, must bear with patience the irritability which attends upon disease and suffering, must witness scenes at which humanity instinctively recoils, and must often inflict pain that good may ensue. Whatever branch of the profession he may intend to pursue, he must be prepared for labour and self-denial, and must waste the midnight oil in solitary study, as well as enter into the active duties of attending upon the sick. And his reward, we regret to add, will often be found only in the approval of his own conscience; for many of those to whom he must minister are the outcasts of the earth, who nevertheless claim at his hands the same attention which would be bestowed upon the most favoured of their fellow-creatures.

Having thus premised the indispensable necessity of morality and religion, together with the virtues which follow in their train, in forming the character and directing the conduct of the medical practitioner, we shall draw attention to a subject on which much has been said and written, but hitherto not so much as the occasion demands: namely, the importance of Preliminary Education. We cannot plead guilty to any exaggeration, when we declare that half the evils of the profession may be traced to a deficiency in this particular. By thrusting uneducated or ill-educated men into the ranks of the profession, the whole medical community is injured and degraded; and we may advance a step farther, and declare our conviction that the multiform shapes assumed by quackery are, in a very great measure, to be traced to the want of sound principles inculcated in youth. The gross absurdities of homœopathy and hydropathy could never have been carried into practice by men who were in the slightest degree acquainted with the principles of logic, or who had taken any trouble to endeavour to trace effects to their causes. The mere fact that persons have been cured under the treatment, is by no means conclusive evidence, for persons have recovered under erroneous treatment and in the absence of all treatment, so great is the power of the *vis medicatrix naturæ;* and even were such cures much better authenticated than they are, there would still be an utter absence of all proof of the truth of the dogmas on which these pseudo-philosophers build the foundation of their practices.

When we argue for the necessity of a sound preliminary education in the case of those who are to be educated for the medical profession, we do so on no narrow grounds; we do not assert that it is absolutely essential that prescriptions should be written in Latin, or that the future practitioner of medicine must necessarily draw his professional knowledge from the original writings of Hippocrates, Galen, or Celsus; but we maintain, that without some training of the mind in classics and mathematics, a young man is wholly unable to comprehend even the alphabet of medical science. On commencing his lectures, he is met at the threshold of his medical studies by a host of names derived from the Greek and Latin languages, which have been very generally, and we think very justly, employed in the construction of our scientific nomenclature; and the terseness, the perspicuity, and the expressiveness of those languages adapt them most admirably for the purpose. Again, in the study of chemistry, the principles of the exact sciences are indispensable; for chemistry is not a science of hypothesis and speculation, but of experiment and reasoning. And in the study of physiology, the questions proposed for consideration are still more difficult; for, in addition to the mechanical agencies which affect the condition of matter, the mysterious principle of vitality is introduced to modify or control the ordinary laws of nature.

When we contrast the condition of the medical practitioner with that of the clergyman, the comparison is greatly to the disadvantage of the former; and if the reason of this disparity be asked, it will be found, we think, in the general superiority of the preliminary education enforced upon the ministers of the Church. Were we to make use of the same line of argument as that which has been adopted in relation to our own profession, we might urge that a knowledge of the classical languages was unnecessary to a clergyman of the present day, that the learning of our ancestors had accumulated for us such a mass of translations and commentaries that an acquaintance with the originals was superfluous, and that good common sense and a fair knowledge of the mother tongue were the only accomplishments necessary for the ministers of religion; but law and custom have (and we think very properly) ordered that it should be otherwise, and the future clergyman is compelled, before he enters upon his theological courses at all, to pass through a definite prescribed course of classical, mathematical, and logical studies. No one ever argued, so far as we are aware, that in order to teach the doctrines of Christianity, it was absolutely essential to be initiated into the mysteries of heathen mythology, or to be thoroughly versed in the intricacies of Greek metres; but that these and similar investigations tend to strengthen the mind and to enlarge its faculties, is undeniable; and we accordingly find, that, in the majority of cases, those who have distinguished themselves most in their University career have been the most celebrated characters in after life. It is not argued that such studies as those we have alluded to, are essential to the clergyman, the barrister, or the physician, in the discharge of the professional duties which fall to the lot of each; but it is maintained, that the exercise of the mental faculties which attends a scholastic career is eminently conducive to that discipline of the mind, which enables a man to practise with success in whatever department his taste or his fortunes may point out.

But it may be urged, that if a high standard of preliminary education were required from all professional men, there would not be found a sufficient number of persons who would be qualified for their respective duties. This argument we have, on a former occasion, shown to be wholly fallacious; for, although a vast proportion of the clergy receive very small incomes, it is a well-known fact that there is no diminution of the number of those who repair to our Universities with a view to the Church, and who, with the scanty emolument which they have in prospect, nevertheless enter with zeal and assiduity upon the laborious and expensive curriculum enjoined by the authorities.

If, then, it be universally admitted, that a sound preliminary education is essential in the training of the clergy, and if the clergy themselves cheerfully adopt the collegiate course which is prescribed to them, it is surely equally necessary that the education of the medical practitioner should not be neglected. The latter is, or should be, on a level with the members of any other profession whatever; and there is nothing in his condition, except want of education, that can make him forfeit this his proper rank.

We have just shown, that a knowledge of the classical tongues is indispensable to a comprehension of the literature and current language of the Medical Profession; and that, without such a knowledge, lectures, discussions, and treatises on medical matters, are comparatively valueless, and almost unintelligible; and we have also insisted that an acquaintance with the exact sciences is no less necessary, to direct the mind in a definite course,—to collect and analyse the multitude of facts presented to the memory,—to arrange and methodize the stores of acquired knowledge,—to retain what is valuable, and to reject what is useless or unimportant,—to lead to the formation of just conclusions, and the rejection of false, foolish, and visionary hypotheses, such as the dreamy mysticisms of homœopathy, hydropathy, etc. But these,

after all, are mere utilitarian arguments ; and we do not advocate the pursuit of knowledge, merely by counting up how much it will eventually be worth to the possessor. No ! we argue for the intellectual improvement of our profession on much higher grounds. We see everywhere around us that education is marching on with rapid and gigantic strides,—that a thirst for knowledge is springing up among all classes of society ; and we cannot allow that the practitioners of medicine, one of the noblest, most ancient, and most useful of the arts, should be distanced in the honourable competition. We cannot endure that, while mathematicians and philosophers are subjugating the material universe to the empire of the mind,—while valleys are literally exalted, and hills made low, by human art,—while even time and space are made subservient to the control of man—we cannot endure that medicine should be deserted by philosophy, and tainted with the discreditable alloy of empiricism. We should indeed rejoice if we could believe that all empirics were (as we believe many to be) well-meaning, though weak-minded men : but we fear that in too many cases the name and titles of the profession are usurped to cover the nakedness of rampant fraud, and to assist more effectually in deluding the multitude. Against such a lamentable condition of things, we believe one of the most effectual barriers to be an improvement in the Preliminary Education of the Profession, which would undoubtedly tend to check, if not altogether to subvert, such tendencies as those to which we have just alluded. The ridiculous and baseless conclusions at which quackery jumps, could never be entertained for one moment by minds trained to accurate mathematical induction and demonstration : and the idea of deluding the public for selfish objects could surely be seldom entertained by persons, who were made acquainted from youth with the glowing pages of the Greek and Roman sages, dramatists, poets, and philosophers, who wrote not for their own age, but for all time, and whose language and whose sentiments will endure as long as a perception of the good and the beautiful is left among the nations of the earth.

But we may be asked to state our views as to the nature of the preliminary education which ought to be recommended or enforced, in the case of those who purpose to enter the Medical Profession. Now this must, of course, vary with the nature of the case ; but, as a general rule, we know of no course of instruction which is more complete and efficient than that required for the Matriculation Examination at the University of London, which takes place once a year, and is open to all students who have passed their sixteenth year. This examination, which is somewhat similar to the Previous Examination at Cambridge, comprises a fair acquaintance with the Greek and Latin languages, and the mathematics, including algebra and geometry ; to which are added the subjects of chemistry or natural philosophy, the principles of English grammar and composition, and the elements of ancient and modern history. In our opinion, the whole of the youth of our profession ought to be subjected to this, or a similar examination; for there is no part of it which does not contribute to enlarge the views and strengthen the intellect. For it should not be forgotten, that the medical practitioner is, or ought to be, essentially a gentleman, and should possess, in addition to his medical knowledge, such an amount of general information as may qualify him to mix in any society. If, therefore, circumstances should prevent him from passing the London University examination, or from graduating at one of the other universities, we consider that he should possess, *before entering the Medical Profession*, at least such an amount of classical and mathematical knowledge as may be acquired at a good school ; and without the possession of this amount of knowledge, he should not be recommended, or indeed allowed, to enter the profession at all ; for, independently of all higher considerations, we conceive that a person destitute of this amount of information is quite unable to follow with any profit a train of medical, chemical, or physiological reasoning, or, indeed, even to comprehend the technical terms used in science. He may, indeed,

learn to apply bandages and extract teeth; he may acquire a certain degree of dexterity in putting on splints; and he may even be capable of prescribing a blue pill and a black draught, without much compromising the safety of the community: but such are not the only necessary accomplishments of the medical practitioner, who is often called upon, not only to draw largely upon his stores of actual knowledge, but to employ the processes of subtle and refined reasoning.

We are most happy to notice, in terms of the highest commendation, the encouragement given, at one or two of our hospitals, to the prosecution of general literature and science among the alumni of our profession. We find that, at St. Thomas's and the Westminster Hospitals, scholarships are instituted for students *who are about to commence their medical career*, and who can pass a successful examination in the Greek, Latin, and French languages, and in the elements of Mathematics. We should most earnestly desire that all the hospitals, and medical schools, would follow so excellent an example; and we should rejoice if the examination were, in all cases, made compulsory, instead of optional.

It may be argued, that it is difficult, if not impossible, for the mass of medical students to reach the standard of education which we have just been recommending. We answer emphatically, that there is no difficulty at all in the matter. It may also be urged, that the system of apprenticeship is inimical to the acquisition of general preliminary knowledge. Now we maintain that a boy of average intellect and application, if placed at a good school, may, by the time he has attained the age of sixteen, acquire a sufficient amount of knowledge to meet the exigency of the case, and be enabled to pass his examinations at the age of twenty-one, even under the disadvantage (if it be one) of an apprenticeship. But we strongly recommend that a boy should after leaving school be sent for a year, at least, to some college, before entering upon his medical career. This, it is true, would delay his passing his examinations until the age of twenty-two, supposing the apprenticeship clause to be still in force. But we are quite at a loss to discover how any injury would ensue, either to the individual, or to the public, by this delay of a year; on the contrary, we think it would be highly beneficial; and we cannot too strongly condemn the practice of granting diplomas at the early age which is now usual. But, allowing matters to stand as they do at present, we have shewn that there is no difficulty whatever in a pupil acquiring a sufficient amount of general and medical knowledge, in the time at present allowed for the purpose.

With regard to the system of apprenticeship, we have already, on a former occasion, expressed our opinions. We neither argue for its continuance, nor press for its abolition: but, so long as the system is permitted to continue, we deem it more advisable to endeavour to increase its utility, than to denounce its abuses.

In leaving this subject, for the present, we repeat our conviction, that THE WANT OF PRELIMINARY EDUCATION among the members of the Medical Profession, is THE GIANT EVIL of our community in the present day. Without a sound basis of general information on the part of students, the efforts of lecturers, professors, and examiners, however well directed, are of little avail. We do not expect perfection under any circumstances; nor do we suppose that, under any system whatever, the members of the Medical Profession will be exempt from the faults, the follies, and the vices of other men: but we strongly maintain that the best—nay, the only safeguard against the inroads of quackery, the prevalence of visionary theories, and dishonest methods of practice, is to be found, in the inculcation of sound religious and scientific principles in early life.

(To be continued.)

Die Geburten missgestalter, kranker, und todter Kinder. Von Dr. Anton Friedrich Hohl, ordentichem öffentlichen Professor der Medicin und Geburtshülfe an der Universität zu Halle, etc. pp. 382. Halle: 1850.

[The Births of Misshapen, Diseased, and Dead Children. By Dr. A. F. Hohl.]

Dr. Hohl has, with considerable research, collected and arranged a large amount of information concerning the various malformations, diseases, and other accidents, to which the fœtus is liable: and has endeavoured to illustrate the practical bearing of this subject, in relation to the process of parturition. He treats successively of Malformation, Intra-uterine Diseases, and Dead Children.

Malformed Children. After a carefully compiled historical introduction, the author gives the following classification of the Malformations of the Fœtus.

Class i. Monstrosity from impediment to the vegetative and formative processes:

A. Of individual parts: (*a*) Head; (*b*) Extremities.
B. Of the entire body: (*a*) Acormous; (*b*) Amorphous.

Class ii. Abnormal connexion and union.

A. Abnormal Connexion:
- *a*. Of the Fœtus with parts of the ovum.
- *b*. Of the Fœtus with accessory and supernumerary bodies (parasites).
- *c*. Of two perfectly formed independent individuals, neither preponderating over the other, by means of a band.

B. Abnormal Union:
- *a*. Of individual parts.
- *b*. Of the corresponding parts of two individuals: (*a*) Malformation, with spurious fusion of parts; (*b*) Malformation, with true fusion.

Class iii. Malformations produced by mechanical causes:

a. From narrowness of the containing cavity.
b. From twisting of the umbilical cord round some part.
c. From abnormal membranes and bands.

These subjects are treated at length under the separate heads of Diagnosis, Influence on the Process of Parturition, and Treatment. The plan upon which the work is written prevents us from attempting to give a detailed analysis: we must therefore be content with translating a few extracts as specimens.

"Acephalous Monsters. In describing this form of monstrosity, we proceed from the more to the less perfect, according as the defect extends from above downwards, and amounts even to absence of the neck and thorax. The more the imperfection of development extends downwards, the greater is the defect in the upper extremities. Acephalous monsters generally have a short round body, with œdematous swelling of the cellular tissue.

"Characters. 1. There is a tumour in the place of the head, in which bones may be felt. The projection is either a round spongy body, or a cavity formed of spongy bones, and covered with a periosteal membrane, or a round protuberance covered with skin, and furnished with holes and excrescences, representing the eyes and nose. This protuberance is a rudimentary cranium, in which the bones of the face are absent, but which possesses frontal and occipital bones. 2. There are no bones; and the rudimentary head feels like a bladder, a cartilaginous tumour, a mulberry-like swelling, a small warty projection, or a membranous lump covered with hairs. The cervical vertebræ are present. 3. The cervical vertebræ are either imperfect or wanting; in the first case, they are fused together, so that they may be mistaken for cranial bones. The head is entirely absent. 4. The dorsal part of the spine consists only

of single vertebræ : the upper limbs are wanting. (Atkinson, *Phys. and Med. Journ.*, 1804, No. 65.) 5. The lumbar vertebræ are either in proper number, or deficient, and the upper end of the body is round, or forms a blunt cone, and sometimes has a small fleshy or membranous excrescence, which may be furnished with thin, or even with thick hair, and is not unfrequently the point of insertion of the umbilical cord. 6. The malformed fœtus is formed only of the bones and muscles of the pelvis and lower extremities. The umbilical cord, in this form of monstrosity, is generally short and thin.

"SYMPTOMS DURING PREGNANCY AND LABOUR. The acephalous fœtus generally occurs in twin and other multiple births, and is rarely found alone. It occurs both in primiparæ, and in those who have borne several children. The mothers are almost always very prolific. (Busch and Moser, *Handbuch der Geburtskunde, Art. Missbildung*, s. 521.) According to J. F. Meckel, pregnancy reaches its full term, and the accompanying twin is usually mature. (*Pathol. Anat.*, ph. I.) Of twenty-two cases, collected by me, the time is given in eleven ; in three, parturition took place at the full period ; in one, at the sixth month ; in four, at the seventh ; in one, at the eighth ; in one, at the ninth ; and one is merely said not to have arrived at the full term. Of forty-seven cases, mentioned by Tiedemann, fourteen were born at the full period, and thirty-three were premature. The presentation is generally footling ; at least such was the case in eight instances, in which the presentation was recorded. The perfect child is born first, and the other follows in from half-an-hour to twelve hours. The obstetrician has here especially to observe : 1. Whether the rudiments of the head are distinct, or entirely wanting. 2. Whether the upper limbs are deficient, or entirely absent. 3. The conical or round end of the trunk, with or without ribs, more or less distant from the umbilicus. 4. The failure of movements after the birth of the first child. 5. The presentation of the feet, which are usually malformed. 6. The usual imperfect development of the generative organs." (pp. 61-3.)

The chapter on the TREATMENT required in the various kinds of malformation is interesting. We quote the general principles which are laid down by the author.

"In every case, where there is a mechanical impediment to labour, the possibility of the presence of monstrosities must not be forgotten, especially when no impeding cause can be discovered to exist on the part of the mother. 2. If the presence of a monstrosity be recognised as the cause of impeded labour, a repeated exploration is indispensable for the choice of a suitable plan of treatment : the kind of malformation, and the relation of the parts to each other and to the maternal passages, must be ascertained as accurately as possible. The fulfilment of this indication is often the more difficult, as we have to determine not only normal, but often abnormal relations. The pelvis may be of usual size, and yet may not suffice ; and a slight, even unconspicuous narrowing may be important, according as the malformation belongs to either one or the other class. On this knowledge depends the choice of the operation, and the manner of performing it. 3. With regard to the mother, the mildest and least painful treatment is to be adopted : the hand is to be preferred to instruments ; and due regard must be had to the safety of the child. 4. If the child be alive, its chance of living, according to the kind of monstrosity, must also be borne in mind. The duration of viability must be considered ; the child may live only a very short time, or even for a considerable period." The author here gives a table from Devergie, shewing the viability or non-viability of various forms of monsters.

"5. If the obstetrician have formed his opinion as to the viability or non-viability of the misshapen fœtus, he must also remember, that a decided solution of this question is, in many cases, impossible before birth, as the condition of the child may be undiscovered : he must also bear in mind, that there are exceptions to the rule, and that a non-viable child may yet live during parturition. We are especially required to consider this, in con-

junction with the latter part of the third rule, (*a*) when we are called on to deliver a malformed fœtus, and (*b*) especially when we can choose between several modes of operation for the delivery of the mother, or (*c*) when the death of the child is demanded for the safety of the mother. (6.) If we are called on to deliver a child which is known to be malformed, it is well to consider how it may be born alive. Its viability should be assumed ; and our third rule should be attended to, in the choice of the mildest and least injurious mode of operating, the hand being preferred to instruments. We thus conscientiously fulfil our duty both to the mother and to the child, and do not bring the former into danger through extreme and violent measures. 7. If we have the choice of several operations, we must not think the life of the child of little value, because it is malformed ; nor must we be careless of giving pain to the child, while we spare the mother ; but we must choose that operation which we believe will terminate the labour securely, quickly, and happily for *both* individuals. That operation is not always most free from danger to the mother, which is but little felt by her, as perforation, embryotomy, etc. ; but very often that which is more painful, is at the same time more sure and speedy. 8. If the death of the child appear to be the last resource for the delivery of the mother, we have to consider whether or not the Cæsarean operation should be performed, because the child is malformed. This question is passed over in silence by some obstetricians, while by others it is answered in the affirmative, and by others again in the negative". (pp. 163-170.)

This quotation will sufficiently show the principles by which the author is actuated. His object throughout is to save both mother and child, when there is the least possibility of accomplishing this. When the death of the child is unavoidable, the importance of attending to its safety cannot be put in competition with that of the mother. "But", says Dr. Hohl, "the obstetrician must not lay his hand too hastily on deadly instruments, because he has recognised a monstrosity ; but he must endeavour to preserve both mother and child, if this can be done without prejudice to the mother". (p. 173.) The treatment of the various forms of monstrosity is next passed in review ; and a considerable portion of this part of the book is devoted to an extended and lucid examination of the means which have been recommended for the delivery of double monsters. The author gives the preference to turning : but he also advocates, when required, perforation, or the use of the forceps.

The following extract from Dr. Hohl's remarks on embryotomy, of which he admits the necessity in circumstances of extreme difficulty, will be interesting in connexion with the memoir of Dr. Chailly-Honoré, on Amputation of the Arm in Shoulder Presentations, of which we propose to give a translation in our Digest of the Journals.

"It is a question whether the removal of a limb can be necessary ? I am a great enemy to the use of cutting instruments in midwifery, and prefer the hand, so far as it is at all possible to use it alone without danger to the mother. . . . . But it is undeniable, that the presentation of an arm may present an insuperable obstacle to manual assistance, and its removal may spare the mother much pain, and the operator much toilsome and fruitless exertion. In such cases, the operation is a necessary evil." (p. 218.)

Diseased Children. This subject is treated of under the following heads.

1. Diseases of the Fœtus connected with debility of single parts or of the whole body.
2. Diseases of the Fœtus connected with increase of the bulk of single parts of the body. Under this head are included, (*a*) Hydrocephalus, (*b*) Thoracic and Abdominal Dropsy ; (*c*) Watery Sacs and Tumours ; (*d*) Enlargement of Internal Organs.
3. Diseases of the Fœtus, with increased size of the whole body ; including (*a*) Cutaneous and General Dropsy ; (*b*) Hypertrophy.

In his preliminary remarks to this chapter, the author points out the importance of more attention being paid to the diseases attendant on intra-uterine life. He enters on a general consideration of the causes, which he refers in part to the parents, especially the mother, and in part to the fœtus and its appendages ; and also makes some remarks on the symptoms produced, both with regard to the mother and the fœtus.

From this interesting and instructive chapter, we can make but one extract :

"Enlargement of Internal Organs. We find enlargement of the liver, of the kidneys, and of the urinary bladder, described by authors. The enlargement sometimes exists alone, and sometimes accompanies other diseases, especially dropsies.

"The *impediment to labour* is increased when other conditions are present which augment the general size of the body. Thus, in a case recorded by Seulen (*Neue Zeitschrift für Geburtskunde*, Band ii, p. 17), there was enlarged liver and general dropsy. In cases related by Müller, Schlesinger, and Vernhes, the liver, kidneys, and bladder, were respectively enlarged, in conjunction with ascites. The simple enlargement of an organ will also impede labour. Mansa relates a case in which the head was torn off with one arm ; the impediment consisting in a greatly enlarged kidney, so that extraction could only be effected after removal of the abdominal viscera. (*Siebold's Journal*, Band xv, p. 3, 1836). Haase relates a case in which there was malpresentation, with prolapsed funis and enlarged liver ; delivery was only effected by turning and evisceration. (*Neue Zeitschrift für Geburtsk.*, Band xi, p. 362). Cases of enlarged kidney have been recorded by J. F. Osiander, Hoering, and Oesterlen.[1] In Osiander's case, the breech presented, and the pains had lasted a long time without any effect. A foot was brought down, when the body was discovered to be enlarged, apparently from dropsy. As the other foot could not be brought down, on account of the size of the body and its untoward projection forwards, extraction was completed with one foot. The child made a few convulsive movements ; it was at the seventh month ; there was no fluid in the peritoneal cavity, but both kidneys were nearly as large as in a grown person, and formed a prominence on each side of the abdomen. (*Gemeine Deutsche Zeitschr. f. Geburtskunde*, Bd., i, p. 167). In Hoering's case, labour came on three or four weeks before the full time. When the head was born, the pains ceased ; and the surgeon, after vain attempts to extract the breech, removed the head and thorax. Dr. Hoering found a tolerably large mass, after the removal of which, the rest of the child followed. The enlargement of the abdomen had been produced by the degenerated kidneys, which consisted of two large lobed masses. (*Würtemb. Medic. Correspondenzblatt*, Bd. vii, 1837, No. 16). In Oesterlen's case, the kidneys formed an enormous roundish tumour, filling the abdomen on each side. The child was born as far as the abdomen, which for some time resisted sharp labour pains and the traction exerted by the midwife. The child was dead. (*Neue Zeitschrift für Geburtsk.*, Bd. viii, p. 384). Other cases are related by J. F. Meckel, Chaussier, and Heusinger. The result was generally favourable to the mothers, although the children all perished.

"The *diagnosis* of such cases is important, but difficult, especially when dropsy is also present. When there is an impediment after the birth of the head, we have to remember that it may arise from adherent twins, from watery sacs and swellings at the lower part of the body, from abdominal dropsy, from distortion of the lower part of the spine, from the entrance of

[1] Intra uterine cystous disease of the kidney was made the subject of a paper by Dr. Cormack, in the *Edinburgh Monthly Journal of Medical Science* for August 1844. Dr. Cormack's paper contains, besides an original case, (illustrated by drawings,) the records, more or less perfect, of twenty instances, several of which are not referred to by Dr. Hohl.

the head of another child into the pelvis with the breech of the first, or from enlargement of the liver or kidneys. A careful external and internal examination will always explain the case, if we remember these facts, and do not allow the consideration of negative possibilities to remove our attention from what is actually present. If the enlargement is produced by a single organ, we find the abdomen more tense and firm than in dropsy; the abdominal walls resist pressure, and we meet with a solid body. This will point out the situation of the enlarged organ; and, if it be the kidneys, the abdomen is distended laterally. Even when there is fluid in the peritoneal cavity, a careful exploration will enable us to feel the enlarged organs. The diagnosis will be difficult if, as in Billard's case, labour is impeded from enlargement of the urinary bladder. The swelling is here more circumscribed than in ascites." (pp. 305-8.)

In the treatment of such cases, Dr. Hohl believes that much may often be done by careful manipulation of the body, without having recourse to instruments. But he allows that, in some cases, instrumental interference is absolutely necessary.

Dead Children. This is a well written and instructive chapter, but our space prevents us from making extracts.

The quotations which we have given from Dr. Hohl's work will sufficiently shew the amount of labour which he has bestowed on the subject; and the interesting and instructive method in which he has arranged his information. Without any pretensions to profound pathological reasoning, the treatise is highly practical; and every one engaged in obstetric practice, to whom it is accessible, must feel interested by the numerous cases with which it is interspersed, and receive valuable information on the treatment of a class of accidents attendant on parturition, which, though their occurrence be more or less rare, ought to be understood by the accoucheur.

Epidemics Examined and Explained, or Living Germs proved by Analogy to be a Source of Disease. By John Grove, M.R.C.S.L. Lond: 1850. 8vo., pp. 192.

The object of this handsome little volume, written in an agreeable style, and displaying no inconsiderable amount of multifarious reading, is sufficiently indicated by its title. The work consists of four chapters; the first being devoted to establish the Probability of Epidemic, Endemic, and Infectious Diseases depending upon Vital Germs for their Manifestations; the second to the Number and Value of Facts to support the proposition; the third to the Reasonableness of the Application of the Facts to the Inference; and the fourth to Results in Proof of the Tenableness of the Proposition.

Mr. Grove, almost at the outset, reasonably enough expresses a doubt whether we are much further advanced in the knowledge of the cause of pestilences, than the Jews in the time of Moses; and he subsequently adds, that all previous writers have signally failed to furnish us with any practical information. Impressed with a very natural conviction of the difficulty of the subject, the author, therefore, has applied himself, as he tells us, solely to the groundwork as the primary proceeding for a solid superstructure. But even with this limited direction of his labour, grave doubts are likely to be suggested by a careful examination of the arguments which he brings forward, whether he has, to any extent, succeeded in *proving* the dogma, somewhat prematurely laid down in the title which he has selected for his work. To our apprehension he has scarcely, in any appreciable degree, succeeded in lifting the veil of obscurity, or, we should rather say, of Cimmerian darkness, which rests on the origin of epidemic diseases, the subject remaining pretty much as he found it: all is dim, shadowy, and uncertain, as before.

In expressing this opinion, however, we utterly disclaim any intention of disparaging either the ability or acquirements of the author; on the contrary, we think he has succeeded as well as most writers, who may be tempted to essay the same task with no better materials. The truth is, that facts are entirely wanting, to afford any stable support for the hypothesis which he has espoused, and necessarily *ex nihilo nihil fit*. Indeed, in the existing state of our information, we look on a successful attempt to prove the doctrine referred to, not only as difficult, but simply impossible; nor is it within the compass even of the highest talent, to give permanency to any medical hypothesis, the groundwork of which has no better foundation than plausible conjectures, and analogical inferences. It is no doubt true, that a theory, if soundly based on an accurate observation of facts, may receive even strong corroboration from analogy; but to rely principally on the latter mode of reasoning, is to reverse the natural order of things, and appears to resemble somewhat too closely the architectural device of that ingenious people, described by the witty Dean of St. Patrick, whose custom it was to commence their buildings at the roof, and to finish them at the foundation. But to examine the subject a little more closely, suppose it were conceded (and this is perhaps going quite as far as the premises warrant,) that a certain degree of probability attaches to the causation of epidemic and infectious diseases by vegetable germs, cells, or sporidia, surely something more than analogical arguments, however plausible, will be required to win general assent to a doctrine so obscure and difficult. When we ask for facts, it will not surely be alleged that the so-called fungoid cells, seen by Mr. Spooner in variolo-vaccine lymph, or the microscopic discoveries of Brittan, Swayne, and Budd in the rejectamenta of choleraic patients, afford any solid foundation to this vegetable theory. Yet utterly insufficient for the purpose, as recent demonstrations have shown the alleged facts to be, the doctrine, we believe, has little else to repose on; and, as far as relates to cholera, it was unanswerably refuted almost as soon as it saw the light. To future advocates of the same hypothesis, it may therefore be reasonably suggested, as an indispensable preliminary to success, to demonstrate, in the first place, that vegetable germs, or spores of a definite character, are invariably present in epidemic diseases; and in the second place, that they are not present in other forms of disease, or in the ordinary conditions of health. This point once firmly established, it will be soon enough to speculate regarding their exact relationship to various maladies, to inquire how far they may be an effect and not the cause of disease, what it is that determines their periods of activity and of long abeyance, their capricious and uncertain movements, and in what manner they operate on the solids and fluids of the animal frame. But, supposing all this to be satisfactorily determined, even then so much would still remain to be elucidated, before we could derive from our investigation of the subject any practically useful knowledge, that we scarcely hope to see this mode of accounting for the causation of disease, transferred from the rank of a mere hypothesis, to the position of an established doctrine in science. At the same time, however, we believe, with the author, that the chemical and animalcular theories of disease are, in the present state of our knowledge, equally untenable; but it by no means follows, that if the views of Liebig, Kopp, and Simon, and of Henle, Holland, and Mitchell be erroneous, that his adopted theory is true. On the whole, we are constrained in candour to say that Mr. Grove has entirely failed to satisfy us that the origin of epidemics is to be found in living vegetable germs; nor shall we probably be the only exemplification of the statement with which he sets out, that "it is one thing for a man to convince himself, but a very different thing to be able to convince others".

But although Mr. Grove has failed to satisfy us as to the origin of epidemic diseases, we have much pleasure in stating that we have found a large fund of very agreeable and interesting information in his treatise. We had

marked several passages for transference to our pages, but we must content ourselves with one specimen, which the author quotes from Dr. Lindley's *Vegetable Botany*. Should the reader agree with us in thinking it very curious, we can with the more confidence refer him to Mr. Grove's volume for the further gratification of his taste.

"One of the most poisonous of our fungi is the *Amanita Muscaria*, so called from its power of killing flies, when steeped in milk. Even this is eaten in Kamschatka, with no other than intoxicating effects, according to the following account by Langsdorf, as translated by Greville. This variety of *Amanita Muscaria* is used by the inhabitants of the north-eastern parts of Asia, in the same manner as wine, brandy, arrack, opium, etc. is by other nations: 'The most singular effect of the *Amanita* is the influence it possesses over the urine. It is said, that from time immemorial, the inhabitants have known that the fungus imparts an intoxicating quality to that secretion, which continues for a considerable time after taking it. For instance, a man moderately intoxicated to-day, will by the next morning have slept himself sober, but (as is the custom) by taking a teacup of his urine, he will be more powerfully intoxicated than he was the preceding day. It is, therefore, not uncommon for confirmed drunkards to preserve their urine, as a precious liquor against a scarcity of the fungus. The intoxicating property of the urine is capable of being propagated; for every one who partakes of it has his urine similarly affected. Thus, with a very few *Amanitæ*, a party of drunkards may keep up their debauch for a week.'" (P. 167.)

Cholera in the Asylum. A Contribution to the Statistics of Insanity and Cholera. By Thomas Giordani Wright, M.D., etc., etc. 8vo. London: 1850.

The volume before us is, in part, made up of "Reports on the origin and progress of pestilential Cholera, in the West Yorkshire Lunatic Asylum, during the autumn of 1849, and on the previous state of the Institution"; but it also contains a detail, at considerable length, of the views of the author, who is Visiting Physician to the Asylum, on the diseases alluded to, as well as some practical and valuable observations on their most appropriate treatment. Various points, connected with both the mental and the bodily malady, are well elucidated by a number of elaborate statistical tables, as the reader will find on reference to the work itself, which is written with much candour, perspicuity, and cleverness. To enable the reader, however, to judge for himself, a few extracts are subjoined; and we only regret that our space will not allow us to draw at greater length on the valuable contents of Dr. Wright's volume.

"All experience in treatment of the insane proves, that a full and nutritious diet tends much to the recovery of the patients, in a majority of cases, even under maniacal excitement, as well as other forms of mental disease; an axiom which is corroborated by the fact, that in asylums, where the diet is liberal, the proportion of recoveries is generally larger than in those where it is more meagre."

The following "Proportion of recoveries to the numbers admitted into English asylums, in which pauper patients only are received, to December 1848": is extracted from the table at p. 40.

	Years Established.	Cured per cent. on admissions.
County Asylum of Lancaster	32	40·1
——— West Riding	30	41·9
——— Suffolk	20	42·1
——— Middlesex (Hanwell)	18	24·4
——— Kent	15	27·7

The disparity here shewn, admits, we have no doubt, of a satisfactory explanation; but the fact is worthy of remark; and, still more so, "the comparative

expense of an equal number of cases, admitted early after being attacked with insanity, and of cases neglected and delayed. Of the former, all were cured, at a cost of about £9 each; while of the latter, those who died cost upward of £30 each, and those who remained about £15 each *per annum*": a tolerably forcible comment on the homely adage of "a stitch in time".

With reference to pestilential Cholera, it may be premised that Dr. Wright, in compiling his tables, restricts the term to those cases in which collapse was present. "Diarrhœa without collapse, therefore, does not constitute Cholera; livid collapse, with or without diarrhœa, does." But, on inspecting the tables, it appears that diarrhœa and Cholera prevailed epidemically in the asylum at the same period; the number of cases of the former having been two hundred, thirty of which ended in Cholera, and of the latter one hundred and thirty-two, in a given period; facts from which the reader may draw his own conclusion as to the relationship between the two maladies. The disease was very fatal, one hundred and six of the Cholera patients having died; the entire number being, as just stated, one hundred and thirty-two; and the number of inmates in the asylum amounting to six hundred and twenty. "By far the highest ratio of recoveries was among cases preceded by diarrhœa." And, in the majority of patients on full diet, their illness ended in diarrhœa only; while a larger proportion of those on common diet were liable to Cholera, and were chiefly attacked without premonitory symptoms" (p. 72). Dr. Wright attributes the outbreak of Cholera, in the asylum, to infection; but the facts, as detailed by him, will not be universally assented to as demonstrative of his opinion. The following remarks on the symptoms are interesting: "Two peculiar features of the cramp accompanying Cholera are, that it was not confined to the stage of collapse, and that the spasmodic rigidity was almost exclusively in the flexor muscles" (p. 99). Again, "The urine was not suppressed so invariably as it is often said to be in Cholera; for we find that one-third of the patients passed urine during the period of collapse; that is in twenty cases, of whom three recovered, and seventeen died. Some made water copiously while livid, and almost pulseless" (p. 101). "Of consecutive fever we had very few examples. The general disturbance of Cholera abated gradually, and the patients became convalescent, without any intermediate stage".

Dr. Wright ascribes the seat of Cholera to the ganglionic system of nerves; but we have not space to examine his train of reasoning on the subject. We must, however, conclude with simply stating, that all modes of treatment, including chloroform, and the mercurial treatment of Dr. Ayre, were found alike inefficient in the blue stage of the disease.

APPENDIX. *We think it right to introduce in this place the following letter from* DR. KNOX, *of Strangford.*

TO THE EDITOR OF THE LONDON JOURNAL OF MEDICINE.

SIR,—In a copy of a valuable and ably written volume termed *Cholera in the Asylum*, by Dr. T. G. WRIGHT of Wakefield, which the author has politely forwarded to me, I find my attention drawn by him to the following passage: "In DR. KNOX's little volume, which contains an admirable epitome of the bibliography of Cholera, an erroneous inference is quoted from this note, which I feel sure the author will do me the justice to correct, when he has an opportunity. The deduction is, that fifty millions of persons having died, there have probably been, *at least*, twice as many cases of Cholera: not as Dr. Knox assumes, that out of a given number of cases one-half had died. The reader will, at once, perceive an obvious distinction between the inferences computed".

The explanation required by Dr. Wright, would most appropriately appear in a second edition of my Treatise; but as I am not exactly aware what time may elapse before that may be called for, I shall esteem it a favour if you will afford me, in the mean time, a brief space in your excellent and widely

circulated Journal, to adjust the question. The most satisfactory way of doing this, as it appears to me, is to quote *verbatim* both Dr. Wright's observation and my own, as follow:

"Therefore, averaging one-half of those attacked to have died, there must have been since 1817, upwards of *one hundred millions of cases* of spasmodic Cholera". (Dr. Wright in the *Lancet*, 1833, and reprinted in his *Reports*, p. 127.)

"Dr. Wright having calculated that of one hundred million cases occurring since 1817, one half have perished". (Knox's *Inquiry into the actual state of our knowledge of Cholera*, etc., p. 75.)

I at once admit that the distinction, pointed out by Dr. Wright in the passage which I have just quoted from his interesting Treatise, is sufficiently obvious; and this admission will, I trust, prove satisfactory to him. But as regards the actual state of the matter, it appears to me to be a distinction without any very substantial difference; for my inference as to the mortality of the disease was by no means solely founded on Dr. Wright's authority, but on a variety of tables which I had collected, and several of which are published in the body of *The Inquiry*. I may add, that in one of the most recent works on the subject (*Cholera and its Causes*, by Dr. Bushnan) the learned writer expressly states that "the mortality of the disease was never reduced much below what may be termed the natural standard: viz., about 50 per cent. of the cases treated, in any given and extensive series of attacks". At the same time, to avoid any misinterpretation of my views on the subject, it is necessary to state that my estimate alluded to, refers only to the more malignant types of the epidemic; for, believing as I do, that the different forms of Cholera are identical, it would, I conceive, be totally at variance with the fact, to assert that one-half of all the persons affected with that disease perish. On the contrary, I have expressly stated elsewhere that "in the milder kinds of Cholera, it is certain that few die, and even in its more aggravated forms many recover; so that the asserted inutility of medicine can only be applied to those cases, very numerous, no doubt, in which the epidemic exhibited an extreme degree of malignancy". *Inquiry*, p. 185.

Believe me to remain, Sir, very faithfully yours,

Strangford, Downshire. ALEXANDER KNOX, M.D.

PRACTICAL OBSERVATIONS ON THE DISORDERS AND DISEASES OF EUROPEAN INVALIDS ON THEIR RETURN FROM TROPICAL CLIMATES. By JAMES RANALD MARTIN, F.R.S., Surgeon Bengal Army, retired, late Presidency Surgeon, and Surgeon to the Native Hospital, Calcutta. Pp. 80. London: 1850.

When we consider the vast number of our countrymen who are compelled, by the exigencies of service or mercantile pursuits, to pass a large portion of their lives within the tropics, we must feel the importance of any discovery which can minister to their comfort, preserve their health, or prolong their lives. The natives of Hindustan and the negro inhabitants of our West Indian Colonies are fitted alike by nature and by habit to bear with impunity influences which are fatal to Europeans; and although the ratio of mortality among the latter has of late been diminished by the improved condition of society, of temperate habits, and more enlightened views on the part of those in authority, yet the number of victims is still great, and the list of those who return to their native land broken in constitution and health, is still formidable.

The work before us is the production of a gentleman, whose name has long been honourably known as co-editor with the late Dr. James Johnson of the standard work on Tropical Climates; and this modest volume is well calculated to sustain his reputation. It is a reprint from a cotemporary, and forms part of a series of Essays, to be published as a whole, we hope, at no distant time.

The diseases of Tropical Climates are as essentially abdominal as those of

this country are pulmonary; the whole force and tendency of external agents is to act in that direction. During the hot and rainy seasons in India, the perspiration is prodigiously increased, amounting in the latter season to an exhausting discharge; as if the very serum of the blood were exuded: and mark the consequence:

"The perspiration is not carried off by evaporation, while the transudation is enormously increased; thus heat accumulates in the body, and the local action of cold produces serious consequences, rendering the system susceptible of the least impression from cold or malarious influences, with a strong tendency to congestion in all the abdominal organs. The excessive watery discharge from the skin during this season must of necessity have the effect of rendering the venous blood unnaturally dense, and of thus causing the European to be more liable to congestive forms of disease. Dr. C. J. B. Williams refers the disposition to liver complaints, dysentery, and cholera to the stimulating properties of the blood, deprived, as we have seen, of more than its usual amount of water and of less of its hydro-carbon". (p. 6.)

This picture truly represents one phase of the existence of the Anglo-Indian, and let us see how he fares in the cold season:

"The now altered balance of the circulation and nervous function, the entire drying up of the surface, and the corresponding congestion of all the viscera; the less arterialized and viscid state of the blood; the diminution of the biliary, and the enormous increase of the renal secretions; the oppressed state of the cerebral, thoracic and abdominal functions, leading to the most formidable and complicated diseases, and to the suppression of chronic eruptions in a previous state of development, all render the cold season of Bengal the reverse of healthy". (p. 8.)

Fever, generally continued and of an active character, is the most common result of the hot season. In the succeeding rainy months, fever assumes a remittent character, with diminished vital action, and dangerous abdominal congestion. As the season advances, dysenteries, as well as fevers, become more frequent, severe, and complicated, the former implicating the whole of the abdominal organs. Cholera is most rife and fatal in April and May. The cold season is characterized again by its peculiar diseases; intermittent fever, with the sequelæ of tumid liver and spleen—insidious hepatic inflammation, terminating rapidly in abscess—apoplexies—paralyses—suppression of eruptions—and visceral congestion of every sort, now hold their sway, blighting the hopes and laying low the head of many an ardent and gallant spirit.

Great, indeed, is the change encountered by the Anglo-Indian on his return to Europe. "Here he enters at once, and without preparation, on a season of eight months of cold and moisture, in exchange for the same period of tropical heat and excessive moisture conjoined. This is a great revolution in climate; and it at once induces a corresponding physiological change in the system, stamping the individual with a peculiar physical character. The exhalant organs of the skin, which for so long a succession of years had been called into most violent action, now become sealed as if with a coating of varnish. From the previous extensive, equable, and sometimes violent determination to the surface of the body, he is suddenly subjected to an opposite action, an extreme dryness of the surface, amounting occasionally to a furfuraceous desquamation of the cuticle, and at other times to a miliary eruption, accompanied by a determination of the whole mass of blood inwards; a loaded condition of the great venous trunks of the abdominal, thoracic and cerebral cavities, with diminished power in the heart and arteries". (P. 11.)

As might be expected, passive congestion is the condition most prevalent, under the conditions just stated; and no matter what his previous disease in India may have been, the morbid condition now superadded proves a serious difficulty to the invalid. It is a very prevalent idea, that Indians are much less susceptible of cold during the first winter after their return than subsequently, as if they had in them, from long broiling, such a store of caloric

as kept them warm in spite of Jack Frost and his confederates. Mr. Martin states that this opinion is erroneous.

"My experience here in the last nine years would lead me to conclude, that if there really be any such immunity from cold during the first year of residence in England, as we hear spoken of so generally in India, it is enjoyed only by the healthy and robust. Numberless examples have satisfied me as to the truth of this observation: a dry or even frosty cold is well borne, comparatively, even by the enfeebled, tropical invalid; but the *damp* cold produces sensations of indescribable distress and depression in persons possessed of considerable powers of resistance.....The truth is, that in general the cold which a tropical invalid can bear without injury for a year or two after his return to Europe, is not of a low degree; and in extreme cases of disease, the in-door temperature carefully regulated during the winter and spring seasons is that alone which is safe to him. We cannot 'comfort' such a person 'with cold' as the Americans do their English customers with ice." (P. 12.)

"Anæmia," Mr. Martin informs us, "is common to fifteen out of twenty of tropical invalids on their return to Europe. In this morbid state, the paucity of blood corpuscles causes a diminished absorption of oxygen, a quicker circulation, and consequently a diminished animal heat. I have no doubt, also, that by long-continued exposure to tropical heats and malaria, the muscular system, including the heart, is relaxed and weakened, becoming irritable and defective in contractile power. I believe that to these circumstances we must refer the diminished power of the forces that circulate the blood, and the intermitting character of the pulse so common to old Indians." (P. 16.)

These observations are of importance in reference to the management of old residents in India. There are few physicians in this country who are practically acquainted with the temperament of such patients, but there are many who from circumstances may be called upon to prescribe for them. These hints are, therefore, of great value, assisting us in forming a diagnosis, and directing us in the application of our treatment. We regret that our space will not admit of our extracting the admirable and forcible description of anæmia as presented in these cases; nor can we attempt to do justice to the observations laid down for the management of this disease; for them we must refer to the work itself, and pass on to the second subject specially treated of.

Passive Congestion of the Liver. This is generally produced by the application of cold to the surface of the body, and not unfrequently by errors of diet. The organ is oppressed by an accumulation and stagnation of blood, while its function is paralysed; with all this we have also very frequently a weakened condition of the heart and arteries, and a diminished power of reaction. Much judgment is required in the treatment, for it often happens that we have to encounter a formidable disease in a debilitated person, who has perhaps been subjected to profuse bleeding, copious mercurials, and other heroic measures employed in the Tropics, where a few hours suffice for a disease to run its course unto death.

The natural result of great over-excitement and frequent disturbance of the hepatic function, is torpor of the liver. The cold and damp of this climate is especially likely to produce it; but there is another exciting cause too generally overlooked.

"It has," says the author, "been observed in Europe, that persons who have used mercury either in the liberal or rapid manner, or as a protracted alterative course, have frequently been afflicted subsequently with severe forms of hepatic disease. There can be no doubt, that through the repeated use of this mineral, even when necessarily exhibited, the hepatic function is inordinately stimulated, to be proportionately enfeebled thereafter. The action of mercury on the liver may be viewed as having a close analogy to

the primary excitement and subsequent exhaustion of the functions of the stomach, produced by dram drinking". (P. 45.)

We now come to a portion of the subject which Mr. Martin has made exclusively his own. Some fifty years ago, an officer arrived at Bombay from the interior, being on his way to England on account of enlarged liver : fortunately, he fell into the hands of Dr. Helenus Scott, who treated him after a peculiar manner, and his health became so speedily restored, that he was enabled to return to his troops and soon after to command them in a battle ; that battle was Assaye, and that officer the Duke of Wellington. The treatment employed in his case was submersion in nitro-muriatic acid baths ; a method which made some noise at the time, but fell into disuse, and so little was it appreciated, that in *Christison's Dispensatory*, Edition, 1842, it is thus spoken of : " It (nitro-muriatic acid) was introduced into the Dublin Pharmacopœia in 1826, in consequence of its having been at the time a fashionable remedy in the form of foot-bath for the treatment of syphiloid diseases and chronic diseases of the liver. It was strongly recommended for these purposes not long before by Mr. Scott of Bombay, and his recommendation brought it for a season into no little notoriety ; but it is now, I believe, entirely abandoned". (P. 41.)

Happily for suffering humanity, the matter has been taken up by Mr. Martin, and rescued from the oblivion into which it had so undeservedly fallen. It is but justice to that gentleman to say, that he has worked the subject out with great talent, zeal, and diligence. He has fortified his positions, by bringing to their aid information derived from chemistry, physiology, and pathology, and has showed that this method of treatment is as sound in principle as efficacious in practice. " It is a very powerful remedy : it acts powerfully in promoting the depurative functions of the liver, kidneys, bowels, and skin. I have, therefore, during more than twenty years in India and England, used it in many of the chronic affections of the liver, functional and structural, believing it, on the ground of my experience, to be an agent of the first order of importance." (P. 48.)

It has long been a subject of surprise to us, that the endermic mode of administering medicines has been so little practised. Why, for instance, is not iron in solution more frequently introduced into the system through the medium of the skin, when it is found to constipate the bowels if taken by the mouth ? Why is not colchicum more frequently administered in the same manner, when its use is indicated, and yet when there are objections to the ordinary mode of prescribing it ? We are firmly of opinion, that medicinal baths are therapeutic agents of great power, and that they are, in this country, by no means appreciated as they deserve.

The baths prescribed by Mr. Martin are thus composed. Three parts of hydrochloric acid, two parts of nitric acid, and five parts of water, are first carefully mixed ; of this, three ounces by measure are added to each gallon of water, and for a recumbent bath about seven gallons is requisite. It is, of course, used warm, and produces a sort of formication on the skin. If used twice daily, a diarrhœa usually takes place from the fourteenth to the thirtieth day, and sometimes earlier, and this indicates that its emulgent action has commenced. Having had some experience in its use, we can bear cordial testimony to its efficacy ; we have seen a patient diminish in circumference over the ribs, *five inches* in two months, whilst under this treatment ; we have seen colour brought into the cheeks, and life into the eyes, in a case where an enormous liver was complicated with lumbar abscess and scrofulous disease of the hip-joint. In another instance, a patient within our knowledge is now in the enjoyment of robust health, who more than a year ago was condemned, by some of the most eminent of our physicians, to a brief existence of perhaps a few months. This gentleman recovered under the care of Mr. Martin ; and we gladly add our testimony, whatever may be its worth, to the efficacy of the nitromuriatic baths in hepatic disease.

The length of time during which they must be used, necessarily varies with each case; but two, or at the utmost four months, generally suffice to work a marvellous change. Amongst the valuable qualities of this therapeutic agent, is the fact of its influence not being in the least degree counteracted by opium. In the words of the author:

"We obtain, in short, from the use of the mineral acids in the treatment of chronic disease, all the remedial aids which can be obtained from mercury in the treatment of acute disease; and that without any of the injurious consequences that so frequently ensue from the exhibition of the last-named agent. Persons of anæmic or scrofulous habit are liable to serious injury from the use of mercury, whether given in large doses during many days or in alterative doses, during weeks or months. It is quite otherwise in respect to the acids, the most marked and lasting improvement of the general health being the ordinary result of their exhibition." (P. 57.)

Every page of these essays bears the impress of a superior mind, sound judgment, lucid views, and enlarged experience. The ground opened up by the author had been almost hopelessly abandoned; but it is now proved to be rich and fertile. Besides the Indian invalid, there are scattered throughout this land hundreds of individuals, who may indeed be said to have entered into the dark valley of the shadow of death. On them,—the victims of hepatic disease,—there now beams a bright star of hope: and we feel that in speaking thus strongly of the treatment advocated by Mr. Martin, we are simply discharging our duty. We may add that the value of the work is materially enhanced by the introduction of many highly interesting and instructive cases.

Atalectasis Pulmonum; or Closure of the Air-Cells of the Lungs in Children. By George A. Rees, M.D. pp. 42. London: 1850.

The term Atalectasis is derived by the author from *ατελης*, *imperfect*, and *εκτασις*, *expansion*: the word therefore ought to be Atelectasis.[1] It is employed to designate a peculiar condition of the lungs, to which the term carnification has sometimes been applied.

The author divides the affection into two forms; one, where it exists as a defect from the hour of birth, and the other, where it occurs as a disease after birth. In the first case, the lung never assumes any other than its fœtal condition; in the second, the disease is induced at various periods after birth. Dr. Rees states that he was the first to describe this second form in the *Medical Gazette* for January 1839.

The *pathognomonic symptom* of Atelectasis is an altered movement of the ribs in respiration; during the inspiratory effort, the ribs move inwards or backwards towards the mesial line of the trunk, instead of outwards as in ordinary respiration, thus diminishing, instead of increasing, the diameter of the cavity. In emaciated patients there is also another remarkable symptom, namely, an undue tumidity of the abdomen; for, in consequence of the altered condition of the thoracic parietes, the abdominal muscles lose, to a great extent, their power of compressing the viscera, and hence the intestines become distended with air, besides exhibiting the phenomena of venous congestion.

The post-mortem appearances in Atelectasis are a solidified condition of the lung, which does not crepitate on pressure, a flabby consistence, and a dark purple colour; a compact structure, and a specific gravity greater than water. But the most curious fact, and one which serves to distinguish Atelectasis from hepatization is, that in the first, the tissue may by inflation be made in a great measure to resume its natural healthy appearance; for in Atelectasis the tissue is only closed and the lung is collapsed, while in hepatization, the

[1] We write *Atelocheilia*, signifying an imperfect development of the lip, and *Ateloëncephalia*, an imperfect development of the brain.

result is due to interstitial deposit, and no attempt at inflation can be attended with success.

Dr. Rees attributes the disease in great measure to the rearing of children in unhealthy localities, and therefore proposes that the treatment should be chiefly of a hygienic nature. He says that it should consist in the removal of the patient (if this can be accomplished) to a healthy locality ; in a judicious attention to diet and regimen ; and also in the administration of such remedies as promote the action of the skin and kidneys, relieve congestion of the hepatic vessels, and at the same time give tone to the system. Dr. Rees gives several interesting cases in illustration of his views.

We consider this little work as a valuable contribution to modern pathology and practice. We entirely adopt the opinions of the author, and commend them, and also the whole subject, to the study of our readers, but particularly to those who, from being engaged in family practice, have a large proportion of their patients among infants and young children.

On the Identity or Non-Identity of Typhoid and Typhus Fevers. By William Jenner, M.D., Professor of Pathological Anatomy in University College, London. pp. 102. London : 1850.

On the Identity or Non-Identity or the Specific Cause of Typhoid, Typhus, and Relapsing Fever. By William Jenner, M.D. pp. 20. 1850.

Dr. Jenner has spent three years at the London Fever Hospital, in endeavouring to solve the problems involved in the titles of the above publications ; and we are doing only a simple act of justice to him, when we state, that whether his conclusions be generally admitted or not, it is impossible not to acknowledge the zeal, and uncommon ability with which he has pursued his investigations. The results of his laborious inquiries are now before the public ; and the two works, the names of which are above quoted, contain an epitome of his views. Dr. Jenner is not a theorist either upon etiology or treatment ; and while maintaining that the causes of Typhoid and of Typhus Fever are essentially distinct, he does not professs to have discovered what the cause of either really is. Upon the treatment of these affections, he does not say a word. Indeed, the whole object of his works is to draw a comparison between Typhoid and Typhus Fevers, and to prove their non-identity ; and as we have just remarked, he has acquitted himself in his self-imposed task with distinguished ability.

Dr. Jenner informs us, in his work on the *Identity or Non-Identity of Typhoid and Typhus Fever*, that he has made notes of nearly 1000 cases during his researches at the London Fever Hospital ; but he (very properly, we think) selects for publication only those cases which proved fatal, and of which he had the opportunity of making post-mortem examinations. The number of these fatal cases, in all of which the symptoms were observed during life, and in which examinations were made after death, amounted to sixty-six, which Dr. Jenner has divided into two groups ; in forty-three, there was no appreciable disease of Peyer's patches, and in the remaining twenty-three, those structures were manifestly in a morbid condition. The first class of cases, were instances of Typhus, and the second class, of Typhoid Fever. The work which stands first at the head of this article, contains an analysis of these sixty-six cases. The age, sex, previous health, general condition of body, size, and complexion of the patients, are all carefully noted and compared ; the duration of the disease and the nature of the accompanying eruptions are minutely recorded ; and a *catalogue raisonnée* of the symptoms during life, and of the appearances observed after death, makes up the chief bulk of the volume. It would be impossible for us to follow the author through all his investigations ; but we may give the following, as among the most interesting and important conclusions which he has drawn from his labours.

Dr. Jenner strongly maintains that Typhoid and Typhus Fever are diseases which have a totally different origin, and are developed in a different manner; and he considers that they are quite as distinct as measles is from scarlatina. The chief anatomical difference consists of the presence of disease of Peyer's patches in Typhoid Fever, and its absence in Typhus; and it was accordingly found, that while in the former fever these patches were always diseased, in every one of the forty-three cases of Typhus Fever there was no recent disease whatever.

The diagnosis of these affections during life may be satisfactorily made by an observation of the concomitant eruption. In Typhoid Fever, it consists of a number of rose spots, of a papular character, slightly elevated, never acuminated at the apex, never flat, but invariably rounded, of a bright rose colour, gradually fading away into the natural hue of the skin, and disappearing completely upon pressure. The eruption accompanying Typhus Fever, is called a mulberry rash by Dr. Jenner; this eruption is never papular, and consists of very slightly elevated spots, of a dusky pink colour. Instead of disappearing in two or three days, like the rose spots of Typhoid Fever, the mulberry rash soon undergoes a remarkable change; the spots become of a darker and more dingy colour, and they only fade on pressure; and after exhibiting these characters, they disappear in some cases. In others, however, they reach a third stage, and the spots change into true petechiæ, *i. e.*, spots presenting the following characters: a dusky crimson or purple colour, quite unaffected by pressure, a well-defined margin, and a total absence of elevation above the level of the cuticle. The usual situation of these spots is on the trunk and extremities, but occasionally they are limited to the trunk, and now and then they are observed on the face.

The *Tongue* is stated by Dr. Jenner to have exhibited a remarkably different appearance in Typhoid and Typhus Fever. It was much more frequently moist throughout the disease in Typhoid, than in Typhus Fever. When dry, it was often red, glazed, and fissured, in the former; but it rarely exhibited these characters in the latter. In Typhoid Fever, when the tongue was brown, its hue was of a yellowish-brown, instead of a blackish-brown. "The small dry tongue, with red tip and edges, smooth, with pale brownish-yellow fur, fissured, the surface seen between the fissures being deep red, may be considered differentially, as a diagnostic sign of Typhoid Fever."

In the treatise on the *Identity or Non-Identity of the Specific Cause of Typhoid, Typhus, and Relapsing Fever*, Dr. Jenner draws an analogy between these diseases and small-pox, scarlatina, and measles; and he maintains, that just as the three last diseases, while presenting certain characters in common, are nevertheless essentially distinct in their specific causes, so the three fevers are characterized by differences equally well marked. The rose spots observed during life, and the presence of disease in Peyer's patches seen after death, are peculiar to, and absolutely diagnostic of, Typhoid Fever: the mulberry rash, often passing into true petechiæ, and the absence of disease in the agminated glands, are characteristic of Typhus; while the Relapsing Fever is distinguished by the recurrence of the symptoms after apparent convalescence.

In answer to the view which has been taken, that Typhoid and Typhus Fever are merely modifications of the same disease, induced by variations of the epidemic constitution, Dr. Jenner maintains that his experience is in direct opposition to such a statement. "I may remark," he says, "that during three years' attentive watching of nearly all the cases admitted into the London Fever Hospital, in which time there have been epidemics of Relapsing Fever, Typhus fever, and Cholera, and, consequently, according to those whose opinions I am here examining, as many changes in epidemic constitution, I have seen no alteration in the general or particular symptoms of either Typhus or Typhoid Fevers, or the lesions observed after death from either, *i. e.*, from November 1846, to November 1849. The cases of Typhoid

Fever, which disease is rarely absent for a fortnight from the wards of the hospital, preserved their symptoms unchanged, and presented the same lesions, whatever the epidemic constitution that prevailed: the same is true of Typhus Fever. Cases of the latter disease are also rarely absent from the wards of the same institution."

Dr. Jenner's work is not only a valuable contribution to practical medicine, but is truly a model to all pathological writers. The conclusions are drawn only after the most careful investigation of facts; and the symptoms and post-mortem appearances are detailed with a minute accuracy, which, though it may appear tedious to the superficial reader, is, in our opinion, absolutely necessary, not only in the investigation of the nature of fevers, but of the history of diseases in general. The habits of the present day have produced much false philosophy in the art and science of medicine; and we hail with pleasure the appearance of a work like that of Dr. Jenner, which draws conclusions only from those true sources which are the foundations of rational medicine.

La Homeopatía, ó Farmacologia Analogo-Infinitesimal, ante el Criterio y el Sentido Comun. Lecciones de Refutacion de la Doctrina de Hahnemann, esplicadas en la Facultad de Medicina de la Universidad de Madrid al concluir el Curso de 1849 a 1850. Por Don Tomas de Corral y Ona, Doctor en Medicina y Cirujia, etc. pp. 258. Madrid: 1850.

[Homœopathy, or Analogo-Infinitesimal Pharmacology, tested by Reason and Common Sense: being Lectures delivered in the University of Madrid, during the session 1849-50. By Dr. Tomas de Corral y Ona.]

After some preliminary remarks on the antipathic, alopathic, and homœopathic methods of treating disease, the author examines the *Organon* of Hahnemann, which he shews to possess none of the characters of order, method, or harmony, which its name might lead one to expect; for "the principles are mixed up with the accessory ideas; the antecedent often follows the consequent; the primary ideas sometimes do not afford a clue to those which follow; and his principles, foundations, and chief ideas, seem as if they had been rained from the sky, without preparation or announcement." Having disposed of the *Organon*, he examines the homœopathic law, *similia similibus curantur*. In the theogony of Hindostan, Egypt, and Greece, in logic, natural philosophy, mathematics, and chemistry, the operation of two opposing forces has been recognised from the earliest ages; and the knowledge of these forces is treated of by the author as a system of *dualism of forces (dualismo virtual)*. The homœopathic law is in direct contradiction to this universal principle; and it cannot be applied to the human body, for there the operation of the law of contraries, is evident both in the physiological and in the pathological states, and is the foundation of rational treatment.

The system of infinitesimal doses is next judged at the tribunal of common sense; for the author very truly says, that it is impossible to reason with those who will gravely maintain, that, if common salt be homœopathically diluted, the taste ought to be felt as the dilution is increased; or that the power of a substance increases in the direct ratio of its diminution.

It may be said by some, that it is beneath the dignity of a University Professor to elaborately refute, *ex cathedrâ*, the rank nonsense of homœopathy; and if we were sure he had to teach a body of young men, well educated, and with well disciplined minds, we would subscribe to this opinion. But in Spain, the preliminary education of the medical profession, though not so much neglected as it is in this country, is still so lamentably deficient as fully to justify the anti-homœopathic lectures of Dr. de Corral y Oña. It is certainly more honourable for the University of Madrid to have one of its professors ably exposing the fallacies of homœopathy, than it is for another university, nearer home, to tolerate the odious scandal of a globulist in the chair of Pathology!

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

ABORTIVE TREATMENT OF VARIOLA BY THE APPLICATION OF COLLODION.

Collodion has been found useful in arresting the course of traumatic erysipelas and of herpes: and the *Bulletin Général de Thérapeutique* for Oct. 30, 1850, contains an account of a case occurring in the practice of M. Aran, which seems to shew it to be an efficient agent in producing abortion of the variolous pustules. We abridge the account given.

Case. A young man, aged 19, was admitted into the Hôpital Bon-Secours, in Paris, with confluent small-pox in an early stage. The face was thickly covered with small pustules, and there was already intense swelling and redness. The fever was very moderate. M. Aran applied a layer of Collodion over the face, to produce abortion of the pustules. In two days, the lips, and lobes of the ears, which had not been covered, shewed well-developed pustules; while scarcely anything could be seen through the Collodion, and, on raising it, the pustules were found arrested. The Collodion having become accidentally removed in parts, the exposed portions of the face, in fifteen or eighteen hours, presented well-developed pustules. It was again applied, and constantly watched, to prevent the patient from tearing it off during his delirium. On the eighth or ninth day from the first application of the Collodion, it began to fall from the eyebrows, leaving them of a rose colour, without any scars. On the following days, the Collodion fell from the other parts of the face, together with the desquamated epidermis. The skin of the face appeared as if it had undergone desquamation after erysipelas. On the other parts of the body, the eruption, which had been very confluent, had left numerous spots and scars. The general condition of the patient was most satisfactory.

Collodion seems to act as a mechanical constringent of the tissues. This view is supported by the fact that, in the latter days of the suppurative stage, the pustules were seen to appear at the edges of the layer, and to raise it, while nothing of the kind was observed elsewhere. M. Valleix has also used the same remedy in a case of *variola discreta*, with perfect success; and in a case of non-confluent small-pox, M. Aran has procured the abortion of almost all the pustules on the face, so as to render it extremely difficult to find a mark.

BRUCINE IN LEAD-PALSY.

As an internal remedy in lead-palsy, Brucine possesses advantages over strychnine, as it is capable of being safely administered in larger doses. M. Bricheteau gives it at first in doses of two or three centigrammes (about one-third to half a grain) daily, and sometimes raises the quantity to eighty centigrammes; but this is rarely necessary. At the dose of from ten to fifteen centigrammes, it produces slight twitchings, with a creeping sensation in the limbs. When the dose is raised to twenty or twenty-five centigrammes, the twitchings become more powerful, and begin to be accompanied by stiffness of the limbs, which are put in a state of forced extension. When the patients are still, the convulsive movements are slight: but if they move in bed, the twitchings and tetanic symptoms appear. When they walk, their limbs become stiff, and they fall forward, if not supported. These symptoms are not accompanied by disturbance of the intellect, nor by headache.

In a case lately under the care of M. Bricheteau, of paralysis of the extensors of the thumbs and fingers, the good effects of this treatment were complete. The paralysis was complete; but, in a month, the patient was able to raise the thumbs, and ultimately made a perfect recovery. (Abridged from *Bulletin Général de Thérapeutique* of October 15, 1850.)

CHLOROFORM IN LEAD-COLIC.

Dr. Aran has published, in the *Bulletin Général de Thérapeutique* for October 15, 1850, the results of his experience in the use of Chloroform as a remedy in Lead-Colic. His observations are confirmatory of the opinions which we expressed at page 285 of this Journal, for March 1850, in referring to the paper of Dr. Blanchet in the *Journal de Chimie Médicale*. The following are the conclusions at which Dr. Aran has arrived.

There can be no doubt as to the possibility of very soon curing Lead-Colic, by the internal and external use of Chloroform. The advantages of this treatment are striking. Lead-Colic is eminently a painful affection ; Chloroform removes the pain. The disease is probably dependent on intestinal spasm, which tends to produce the characteristic obstinate constipation ; Chloroform calms the spasms. It does not, indeed, cause the lead to be evacuated from the system ; but, by the employment of sulphur and alkaline baths, the skin is freed from the metal ; and the same effect is produced on the intestines by enemata. No inconvenience is likely to arise, when the evacuations are re-established slowly and with difficulty, from the use, for some days, of castor-oil or some other mild purgative. Drastic purgatives frequently increase the colic, and even produce vomiting, when given before the pains are calmed and the evacuations re-established. Chloroform, applied principally externally, immediately calms the pains, and facilitates the use of purgatives, if it be found necessary to employ them.

The mode of external application, adopted by Dr. Aran, is to pour from one to two drachms of Chloroform on a wet cloth, and keep it applied to the abdomen for a quarter or half-an-hour. He also gives it in mixture ; and in enemata, preceded by a common injection. It is on the local application, however, that he seems to place most reliance. The enemata have sometimes appeared to increase the pain.

CASE OF SOFTENING OF CEREBRUM AND CEREBELLUM : FATTY DEGENERATION OF HEART : TUBERCULAR ABSCESSES IN LUNGS.

Dr. J. D. Brown of Strood, Kent, relates the following case in the *Medical Gazette* for December 13, 1850.

Case. E. K., aged 39, had suffered for five years from occasional attacks of giddiness, pain in the head, and sickness, with numbness in one of the lower limbs. In December 1849 and January 1850, she laboured under symptoms of chronic inflammation of the brain, which appeared when she had scarcely recovered from a miscarriage. Her memory was impaired : there was paralysis of the left lower extremity, with weakness of the right leg ; there was occasional rigidity of the muscles of the lower limbs. Emaciation progressed to a considerable extent. On the 7th June, she was attacked with bronchitis, but recovered. On the 19th, she was seized with a paroxysm of breathlessness, which returned several times ; and she died in one of these paroxysms on the 29th. Throughout this day and the preceding night, she fancied she saw deceased persons. Her consciousness never failed, though she had a dull, vacant aspect. She said that there was a sensation of "squashing" in the back part of the head, and that, when erect, she felt as if about to fall forward.

Post-mortem Examination, forty-two hours after death. The skull was dense, and greatly thickened, particularly anteriorly and laterally. There were about three ounces of serum beneath the membranes ; the ventricles contained but little fluid. The vessels of the *pia mater* were dilated : there was no disease in the arteries at the base of the brain. The cerebral convolutions were healthy, and moderately firm. There was white softening of the corpus callosum ; the fornix and its crura were almost destroyed, and

the peduncles of the pineal gland were completely removed by ramollissement: the crura cerebri in the vicinity of the pons Varolii, the superior vermiform process, and the upper surface of the cerebellar hemispheres, were in a softened state. The medulla oblongata was sound. The heart presented an extreme degree of fatty degeneration. The lungs were emphysematous anteriorly, and contained numerous tubercular abscesses, filled with thin pus, and having no communication with the bronchi. The liver was large and fatty: the spleen extremely soft; and the kidneys also much softened.

COD-LIVER OIL IN JAIL-CACHEXIA.

Mr. Caleb Rose of Swaffham, Norfolk, has published, in the *Provincial Medical and Surgical Journal* for Nov. 27, 1850, some remarks on the scrofulous Cachexia, common among prisoners, which he believes to differ from the ordinary forms of scrofula. The symptoms of the disease are these: The man looks paler and thinner than usual; is very much depressed in spirits; has no appetite; sleeps badly; and has profuse night-sweats; there is slight diarrhœa; the pulse is quick, irritable, and feeble. The cervical glands are always more or less enlarged, and continue to enlarge very rapidly. In five years, three died in prison, two of very rapid phthisis, the third of tubercular peritonitis. The others who were seriously affected, were discharged before their proper time, and recovered speedily after their liberation. Those who suffered less were carried on to the end of their term of imprisonment by care and indulgence. Rather more than two years since, the use of Cod-liver oil was commenced, and with the best effects. The two men who first took the oil had the cervical glands much enlarged (in one of them suppurating) and, as they had still to remain some months longer in prison, it was thought that they must have been discharged before the end of their term; however, after taking the oil a month, they improved steadily, and eventually left the prison at their proper time, in as good health as when they entered it. Since these two cases, there have not been any so severe, as the oil has been administered in good time to those presenting indications of scrofula; they have gained flesh and strength, and their health has apparently been entirely restored.

ADMINISTRATION OF IRON IN FOOD.

M. Martens has lately read an essay before the Belgian Academy of Medicine, on Ferruginous Medicines. Among his conclusions, as published in the *Gazette Médicale de Paris* for 30th November, we find the following:

"Wheaten bread may be rendered much more nutritive" for chlorotic patients, "by adding a small quantity of sulphate of iron. In this way alone, it can be capable of forming a substitute for meat."

In the discussion, it was suggested that the same method of medication would be beneficial to patients recovering from acute diseases, especially when the system was not yet able to bear an animal diet. The idea is good: and would be easy of application.

SURGERY.

STATISTICS OF AMPUTATIONS OF LARGE LIMBS IN THE MASSACHUSETTS GENERAL HOSPITAL.

Dr. George Hayward, one of the surgeons to the Massachusetts General Hospital, has published in the *Boston Medical and Surgical Journal* for October 2, 1850, a valuable statistical account of all the Amputations of Large Limbs which have been performed in that institution from January 1822 to

January 1850. He gives two tables; the first comprising 67 cases, extending from January 1822 to January 1840; the second, including 74 cases, occurring from the latter period to January 1850. The following is a summary of the principal facts contained in the tables.

The entire number of patients was 141, on whom 146 operations were performed.[1] They may be thus arranged:

Seat of Operation.	Cause.		Rec.	Died.	Per Cent. Rec.	Per Cent. Died.
Above Knee, 69	Disease	49	40	9	81·6	18·4
	Injury	20	10	10	50·0	50·0
Below Knee, 50	Disease	24	23	1	95·8	4·2
	Injury	26	17	9	65.4	34·6
Above Elbow, 11	Disease	7	7	0	100·0	0 0
	Injury	4	3	1	75·0	25·0
Below Elbow, 11	Disease	6	6	0	100·0	0 0
	Injury	5	3	2	60·0	40·0

It thus appears, that 85 patients had their limbs removed in consequence of disease, of whom 10, or 11·76 per cent., died; and 56 in consequence of injury, of whom 22, or 39·3 per cent., died.

The ages of the patients were as follows:

Under	20 years of age,	26,	of whom 4 died.
Between	20 and 30	56,	" 11 died.
"	30 and 40	28,	" 10 died.
"	40 and 50	18,	" 5 died.
"	50 and 60	7,	" 1 died.
"	60 and 70	4,	" 1 died.
	Over 70	2,	" 0 died.
		141	32

In the second table, it is stated whether each operation was performed by flap or by the circular method.

	By Flap.	Circular.
Above Knee	20	15
Below Knee	14	12
Above Elbow	2	5
Below Elbow	1	5
	37	37

The following are some of the remarks made by Dr. Hayward:

The result of amputations is much influenced, not only by the age and constitution of the patient, and the disease or injury for which the operation is performed, but also by the period at which it is done. In cases of chronic disease of the limbs, the operation is often deferred till it is too late. But an operation is often resorted to in recent injuries, earlier than it should be. If the injury be not so serious as to cause almost immediate death, reaction usually comes on, with proper management, in a few hours; and then, if an operation be necessary, it can be done with a much greater prospect of success than during the stage of prostration.

In rail-road accidents, there is a great tendency of the parts in the neighbourhood of the injury to slough after the operation. These accidents, when sufficiently severe to require amputation, are usually caused by a wheel of an

[1] In two of the cases of amputation above the knee, the other leg was also removed below; both died. In two, both legs were removed below the knee, and both patients recovered; in one case, one arm was removed above the elbow, and the other below: this patient also recovered.

engine or railway car passing over the limb, and generally producing a compound and comminated fracture of the worst kind. If the operation be performed in the immediate neighbourhood of the injury, the parts, however apparently sound at the time, will in most cases slough to a greater or less extent, so as to require the removal of the protruding portion of bone at a subsequent period. The operation should be done at a greater distance from the injury, than is usual in ordinary cases of accident. The condition of the parts resembles that which is described by military surgeons under the name of local asphyxia, as occurring from gun-shot wounds. It is a state of suspended animation, differing from death only in the fact, that the power of resisting decomposition is for a time retained; but the debilitating effect of an operation is very sure to destroy this.

Forty-eight of the patients inhaled some anæsthetic agent, generally sulphuric or chloric ether. It was at this hospital that these agents were first successfully employed in general operative surgery; and so satisfactory have been the results, that no operation of any importance is now performed there without the previous use of these means. No fatal effects have followed their administration, nor has any serious ill consequence ever ensued.

CASE OF FIBROUS POLYPUS, BY PROFESSOR SYME.

The following is a very interesting case, which appears to have been at first mistaken for some more malignant disease; probably for fungus hæmatodes. Yet we think that a longer period than three months would be necessary, to decide whether the unfavourable prognosis made in the first instance were correct or not. It is reported by Professor Syme in the *Edinburgh Monthly Journal* for November 1850.

Case. Lord —— consulted Mr. Syme on 29th June, 1850. He had, in consequence of a fall from horseback three years previously, sustained an injury of the nose, followed at different times by profuse bleeding, and complete obstruction of the nasal passages, with loss of smell and taste. Small portions of a polypous growth had been extracted; and repeated attempts at extraction were subsequently made, without success. On consultation, in London, it was decided that any operative interference was ineligible; that the case did not admit of any beneficial interference; and a certain and not remotely fatal termination of his complaint was predicted. On putting his finger into the pharynx, behind the soft palate, Mr. Syme recognized a polypous growth, extending from the nose backwards. On re-examination, both nostrils were found completely obstructed, both in inspiration and expiration. Nothing was felt in the left one: but, in the right, a small portion of polypus, similar to the ordinary mucous growth, was perceptible. Pressure on the pharyngeal tumour excited profuse bleeding, more from the nose than the throat. At all times, there was a copious distillation from the nostril of a slightly coloured fluid, which could only be removed by a wringing sort of action; and at night the bed-clothes were soiled by it. The morbid growth was speedily extracted, in one mass, through the nose, with the small polypus forceps introduced into the right nostril, aided by the fore and middle fingers of the left hand, inserted behind the soft palate. The operation was in every respect successful, and three months had passed, without any threatening of a relapse.

The polypus consisted principally of a reddish fibrous substance, extremely firm, except where it descended into the pharynx, where it was more friable. It agreed in all respects with the "fibrous polypus" of M. Dupuytren, viz.. in firm consistence at the central or original part; in a tendency to soft degeneration at the circumference; in a great disposition to bleed; in a strong adhesion to the surface of the bone; and in the absence of any malignant action after its complete avulsion. The source of the complaint in Lord ———'s case probably existed long before the accident to which it was attributed.

FRACTURE OF THE OS CALCIS.

Dr. Uhde reports the following case in the *Mittheilungen über die in der chirurg. Klinik zu Braunschweig vorgekommenen Krankheiten und Operationen.*

Case. C. W., a journeyman carpenter, æt. 40, was admitted into hospital on the 20th November, 1844. Four hours before admission, he had fallen from a ladder a height of twenty feet, on a floor covered with sand as high as a shoe. His heels first came to the ground. He complained of very severe pain in the heel of the right foot. He said that, on reaching the ground, he heard a cracking sound in the foot; and asserted that he could neither walk with, nor extend it. There was also pain in the right calf. On the back of the foot, there was a hot, moderately raised swelling. On the lower surface, and on the heel, no change of form was observable. When the heel was grasped in one hand, and the foot pressed against it with the other, mobility and crepitation were readily perceived. The anterior third of the Os Calcis was fractured from above downwards. The examination gave extreme pain to the patient.

Rest and cold applications, with Dover's powder at night, were the only means employed till the 27th. On this day, a dextrine bandage was applied, which remained on until the 21st December. On the 27th of this month, the patient was enabled to leave the hospital on crutches; and in the middle of January 1845, he was first enabled to walk without lameness.

It could not be discovered whether the bone united by callus or by ligament. The right foot was for a year subject to swelling after exertion. The degree of weakness, which Metzger asserts to attend this affection, was, in May 1848, no longer observable.

DR. DOUGLAS MACLAGAN ON THE EXTIRPATION OF ERECTILE TUMOURS BY CAUTERY.

In his *Lectures on General Therapeutics*, Dr. Douglas Maclagan makes the following remarks: "These Erectile Tumours, which consist essentially of a congeries of enlarged blood-vessels, are commonly treated by ligature; but this causes a good deal of suffering, and often much constitutional irritation, before the strangulated mass finally separates. The method of applying the cautery is to pass a large red-hot surgical needle, which may be readily heated by a gas-flame, once or twice through the base of the tumour; and the object is to cause effusion of lymph, and thus to alter the structure of the tumour, and arrest its growth. There are other means of effecting this object; but I mention this as one which, though noticed in surgical works, has not received that attention which I think it deserves." [*Edin. Monthly Journal*, November 1850.]

DR D. MACLAGAN ON THE APPLICATION OF CAUSTIC TO THE HÆMORRHAGE FROM LEECH-BITES.

The following is the substance of some remarks made by Dr. D. Maclagan on the arresting of Hæmorrhage from Leech-Bites.

In cauterizing to arrest bleeding from a cavity, as a leech-bite, or the alveolus of the jaw, it is obviously essential that the caustic or cautery penetrate to the very bottom of the wound, which is probably the chief source of the hæmorrhage. In leech-bites in children, Dr. Maclagan has seen a piece of caustic cause much pain, and yet leave the bleeding artery as active as ever, simply because it was too thick to reach the bottom. He has often, therefore, had recourse to a simple and ingenious plan recommended by the late Dr. James Hunter; viz, to powder a piece of nitrate of silver, heat the point of a silver probe in a candle, and dip it into the powder; it thus becomes crusted with the nitrate, and forms a fine button of caustic, which

will easily reach the bottom of any such wound. When the bleeding has been stopped, we must beware of injudiciously meddling with the part: the occlusion of the divided vessels is as yet only temporary, and may be easily overcome. [*Edinburgh Monthly Journal of Medical Science*, November 1850.]

DISLOCATION OF THE FIFTH CERVICAL VERTEBRA: DEATH IN ONE HUNDRED AND TEN DAYS.

Case. On Dec. 16, 1848, Mr. I. Mansfield, a muscular, healthy man, æt. 28, of strictly temperate habits, fell backwards from a spring wagon in which he was riding slowly in an erect position, and struck the ground. He was found instantly, lying on his side, with his body and legs flexed, and complaining of great pain in the back of his neck. With some assistance, he walked to a house about four rods distant, and then lost all use of his lower extremities, and nearly all power of using his arms and hands. He had constant pain over the fifth and sixth cervical vertebræ, increased by the slightest motion of his head. The pain was greater in the left shoulder and arm than in the right.

From the seat of the pain, and the tumefaction, from the entire loss of sensibility below the fifth cervical vertebra, as well as from paralysis of the intercostal nerves, and respiration being performed only by the diaphragm, it was evident that the force of the fall was received on the spinous processes of the fifth and sixth cervical vertebræ. No evidence was discovered of fracture or displacement. There was considerable general excitement; tongue coated; pulse 100; skin hot; great thirst. Treatment: venesection; leeching; cathartics and blisters. The urine was high coloured, and exhaled a strong ammoniacal odour. The catheter was required twice daily.

January 10*th*. Pulse 90; appetite improving; unable to lie on either side; often declared he would much rather die than be turned; dreaded the slightest motion of his body or head; had almost constant pain in his shoulders and arms; and often, both night and day, screamed out for the attendants to move his arms, which mitigated the pain, but only for a short time.

February. As his position could not be changed, large ulcers formed. Tongue clean; pulse 90; appetite good: sleep much broken; ulcers dressed with antiseptics; totally unconscious of dejections, which took place generally once a day with great regularity. Took strychnia. Shocks from the galvanic battery seemed for awhile to arouse twitching and considerable feeling in his legs, arms, and hands; involuntary passage of urine.

March. Evidently more feeble; ulcerations rapidly extending, exposing the middle of the sacrum and left tuberosity of the ischium, discharging copiously very fœtid matter. The ulcers were dressed with cotton, dipped in dilute nitric acid. Tonics and stimulants were taken. Could now move his head slightly to either side. Abdomen tympanitic. Had slight and transient sensation on the skin of his feet, on the sides of his thorax, and on the skin.

April. Emaciated rapidly; high fever; pulse 105; appetite gone; powers failing; occasional vomiting; intense burning heat through the abdomen. 6th. The ulcers had laid bare the three upper lumbar vertebræ, and discharged freely. Pulse 140; copious perspiration; countenance cadaverous; cheeks and eyes sunk; suffered great pain; and seemed to breathe with pain; articulation distinct; mind clear and composed; aware of his critical situation. Inhaled a few drops of chloroform every few minutes, just enough to overcome the sensation of pain, and leave the mind unaffected. 7th. He died.

Autopsy eighteen hours after death; by Dr. Nye and Dr. J. B. Holder. Muscles thickened over lower cervical vertebræ. Fracture of the left bifurcation of the spinous process of the fifth cervical vertebra; the fifth cervical vertebra dislocated anteriorly full two-thirds of the diameter of the spinal canal; fracture of one half of left articular process of sixth cervical vertebra, leaving the right articular process entire, but covered with ossific deposit. A thin lamina of bone deposited around the middle of the body of the sixth

cervical vertebra, extending, at an angle of forty-five degrees, nearly to the anterior inferior edge of the fifth, which overhung it. The lateral articular processes firmly united by bony union. Fracture of one-half of the right articular process of the sixth, allowed the right side of the fifth to project forwards farther than the left side. Short spiculæ of bone, turning inwards on the medulla, from the superior edge of the posterior part of the sixth cervical, and from the inferior edge of the fifth. The cavity of the medulla was diminished two-thirds of its diameter, and contained large clots of coagulable lymph external to the membranes. Medulla much softened for the space of one and a half inches; and membranes soft and thickened.

It is a well-known fact, that displacements of the fifth cervical vertebra are generally suddenly fatal. Sir A. Cooper says, the patients die in from three to seven days, according as the injury is seated in the fifth, sixth, or seventh cervical vertebra.

The reporter (Dr. James M. Nye) asks, may we not reasonably expect that, in cases of spinal displacements, if not in fractures (if the diagnosis is correctly made out), some means may be discovered for their successful reduction? Etherization, too, would probably, he adds, be auxiliary to such means, as in other surgical operations. [*Boston Med. and Surg. Journal*, 1849.]

OBSTETRICS.

AMPUTATION OF THE ARM NOT NECESSARY, WHEN THIS LIMB PROTRUDES IN SHOULDER-PRESENTATIONS.

M. Chailly-Honoré has published a valuable paper, on the above subject, in the *Bulletin Général de Thérapeutique* for July 15, 1850. We give a slightly abridged translation, with copies of the wood-cuts by which the memoir is illustrated.

The protrusion of the arm is not a complication of shoulder presentations: it is an epiphenomenon, which never affords any obstacle to delivery. The accoucheur is, therefore, never authorised to amputate this limb; and its presence does not impede the operation of turning. This proposition is supported by the following case, which lately occurred under M. Marrotte, in the Hôpital Ste. Marguérite.

Case. A woman named D., entered that establishment to be confined. The membranes had been ruptured four or five hours before the *interne* examined her. Discovering a presentation of the right-arm, he attempted to turn, but without success. M. Chailly-Honoré, being called to the case by M. Marrotte, found the arm very swollen, and livid; he fastened a string to it, which he caused to be held loosely on the outside, then turned the child, and completed delivery in a few minutes. Although fifteen hours had elapsed since the rupture of the membranes, the child was alive.

Although a contrary opinion has been maintained, it is certain, that the protruded arm can never be an obstacle to turning: and when (which seldom happens) this cannot be effected, the impediment does not arise from the protrusion of the limb; on the contrary, it facilitates the diagnosis, permits the position of the child to be ascertained, and renders extraction more easy, after the feet have been brought down. The real obstacle has been proved to exist in the energetic action of the uterus.

In some cases, nature completes the labour by *spontaneous evolution*. This, which is much better known than spontaneous version, is accomplished in shoulder presentations, almost exactly under the same laws as all other cases of spontaneous expulsion; and the analogy is more perfect, as the infant approaches to the full size. At the same time, this proceeding becomes more difficult, and more dangerous for the mother and child. To illustrate this form of delivery, we may suppose a case of presentation of the right shoulder, the position being the *right cephalo-iliac*.

Immediately after the rupture of the membranes, the parts are diminished in volume. This period is analogous to that of flexion in presentation of the vertex, and to deflexion in that of the face. The shoulder then gradually passes into the pelvis: and, as it does so, the fœtus, by a rotary movement, places the head on the horizontal branch of the left pubic bone, and the shoulder under the pubic arch. The arm then appears outside the vulva: but sometimes it presents before this period. The flank of the fœtus is now pushed into the pelvic cavity, gliding over the right sacro-iliac symphysis, while the shoulder remains immoveable. The pelvic extremity follows the same direction as the side. At last, the perinæum bulges, and the lateral and upper parts of the chest, the hip, and the lower limb, appear at the anterior commissure. As these parts are disengaged, the head and left arm descend, and are very soon expelled, generally without any rotation of the head. In fact, the maternal parts have just been too much distended. (See Figs. 1, 2, 3, 4.)

Fig. 1. Spontaneous evolution: presentation of arm.

Fig. 2. Spontaneous evolution.

Fig. 3. Spontaneous evolution.

Fig. 4. Spontaneous evolution.

When the fœtus looks anteriorly, expulsion occurs in the same manner; but it is here more easy to observe the regularity with which rotation is accomplished, by which, in all presentations, the posterior part of the fœtus must be turned forward. As the fœtus escapes from the vulva, it performs a movement of torsion, which brings its back to the front part of the mother. (Fig. 5.) M. Paul Dubois was the first to determine the existence of this phenomenon. A number of cases of this kind have been reported by MM. Chailly-Honoré, Velpeau, and Denman.

Fig. 5. Spontaneous rotation.

In the majority of labours at the full period, this expulsion cannot be effected, when the pelvis and the fœtus are of normal size: the mother will generally perish before labour is completed, if not assisted by art. The dangers to which both mother and child are exposed are easily explained. The length of the labour, and the pressure to which the fœtus is subjected, almost always prove fatal to it; and the forced passage of the child bruises and lacerates, more or less, the maternal organs. Moreover, the horrible and continued pain attendant on such a delivery, produces a constitutional shock from which the woman cannot recover. The unfavourable prognosis attending on this form of labour militates against the practice of Denman, who left most of these cases to nature. In 137 cases of spontaneous evolution, collected by M. Velpeau, 125 infants died. Many women have perished before delivery was completed, or soon after; and many have continued to live, in a state more deplorable than death itself. Before the full period of gestation, spontaneous evolution may be safe, both for mother and child, especially if the pelvis be capacious, the uterine contractions very powerful, the fœtus small, and the parts offering little resistance. As may be supposed, it is very difficult in primiparæ.

As, then, spontaneous evolution in these cases is only effected under exceptional circumstances, and almost always compromises the life of the child, and frequently that of the mother, the *accoucheur must never be content with being a mere spectator in such cases.* He must render his aid before the energetic action of the uterus has placed insurmountable obstacles in the way of turning. Should traction be exerted on the arm? This can produce no good result: even when the infant is very small, it would be fatal to it; and would, moreover, endanger the integrity of the maternal organs. Must the arm be replaced? The resistance of the uterus renders this impossible; and the attempts to overcome the action of the uterus are dangerous to the mother: besides, the reduction would be useless. On the contrary, it is an advantage to have the arm disengaged: it facilitates, as has been already said, the extraction of the trunk.

Those authors who have advised amputation of the arm, found their observations on the alleged facility with which turning has been effected after this operation has been performed. The following two cases will show reasons for entertaining a contrary opinion.

Case I. Dr. Lebrun, of Argenteuil, called M. Chailly-Honoré to deliver a woman. Two accoucheurs had previously for two days made repeated and unsuccessful attempts at turning. This was now effected in a quarter of an hour, without pain to the patient, and with great facility ; the explanation of which was the following. As long as the woman preserved her strength, the uterus had been able to react against the hands of the operators ; but at last she was in such a state of exhaustion, that the uterus was relaxed. The approach of death had brought on such a complete state of collapse, that the hand could be passed into the uterus ; whereas, a few hours before, this was impossible. *This is the whole explanation.* In fact, supposing that the arm had been removed, the ease with which the hand was introduced, would certainly have been attributed to this operation. It is such cases as this, which, being misinterpreted, have led into error.

Case II. An obstetric practitioner was called to assist in turning in a similar case. Finding it difficult to introduce the hand, he amputated the child's arm, without examining whether it were alive or not. He was at least not more successful in his attempts after the operation ; for, instead of a foot, the other arm, lying near the orifice, was brought down. M. Chailly-Honoré was now called ; and proceeded to deliver the woman by placing her on her knees and elbows. This position, for a knowledge of which he is indebted to M. Kilian, of Bonn, permits the feet to be reached with the greatest ease (see Fig. 6). When the woman is in this position, the hand, unless the

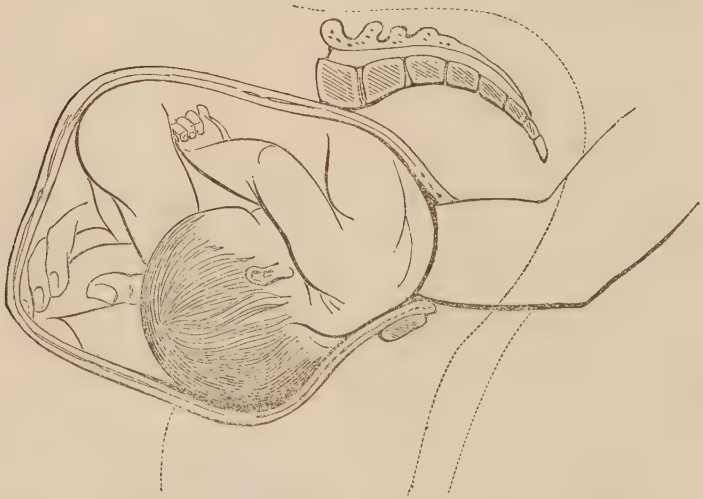

Fig. 7. Introduction of the hand, the patient being on her knees and elbows.

action of the uterus be too energetic, passes directly towards the fundus of the organ. But when the woman is on her back, the hand and arm have to be bent forwards in order to find the feet ; and thus the attitude compromises the success of the operation. In this case, with the change of position of he patient, turning was easily accomplished, the second arm still remaining outside the vagina. If it had been amputated, the success would have been ascribed to this operation.

M. Chailly-Honoré has observed many similar instances ; and he has been induced now to notice this subject at some length, as some of the cases have come under his notice since the publication of his work.

Far from impeding the operator, the arm even renders his manipulations

more simple and easy. It can scarcely be supposed to be otherwise; for the arm, however swollen, is not large enough to prevent the hand from passing into the uterine orifice. The only cause which can render turning impossible, is uterine contraction: and this is always more or less energetic when the arm is disengaged; being, in fact, the cause of the latter phenomenon.

PROFESSOR SIMPSON ON PUERPERAL AND SURGICAL FEVER.

The following is an abridgment of a paper published by PROFESSOR J. Y. SIMPSON, in the *Edinburgh Monthly Journal of Medical Science* for November 1850.

Nearly three thousand mothers die in child-bed, every year, in England and Wales, the great majority from Puerperal Fever.[1] Many subjects of surgical operations die, however well the operations may be performed. Among every hundred cases of amputation of the limbs, about thirty die. In four thousand nine hundred and thirty-seven cases of these amputations, collated by Dr. Fenwick,[2] one thousand five hundred and sixty-five died, *i.e.*, nearly one in three. These deaths after operations depend, in a large proportion of cases, on a combined febrile and inflammatory morbid state, generally, if not specifically, the same as Puerperal Fever, and which may as correctly be denominated "Surgical Fever" as the other is denominated "Puerperal Fever".

A strong analogy, if not an identity, between these two forms of disease, is indicated—1. By the anatomical conditions and constitutional peculiarities of those who are the subjects of them. 2. By the pathological nature of the attendant Fever. 3. By the morbid lesions respectively left by each disease. And 4. By the symptoms which accompany each affection.

1. ANALOGY IN THE ANATOMICAL CONDITIONS OF THE SUBJECTS OF PUERPERAL AND SURGICAL FEVER. In the surgical patient, we have a solution of continuity, on the exterior of the body, with numerous arteries and veins opening on the free surface of the wound. In the puerperal patient, we have a solution of continuity on the whole internal surface of the womb, made by the separation of the placenta, and the exfoliation of the decidua or mucous membrane of the uterus; this wound has, opening on its free surface, the mouths of numerous arteries and veins; and it is repaired by the exudation of serum, lymph, and pus, (lochial discharge), and by the formation of a new layer of mucous membrane. Both classes of patients are liable to present the symptoms of shock or collapse, and a subsequent limited febrile reaction,—the traumatic fever of the surgeon, the so-called milk fever of the obstetrician. In both instances, the secretions of the wounds may morbidly alter; or they may become the seat of an excess of inflammation or ulceration; or of phlebitic suppuration and its consequences. In both cases, air may enter by the open mouths of the veins; both may, though very rarely, be followed by delirium, tetanus, and other nervous complications; and in like manner, but much more frequently, they are apt to be followed by that form of combined febrile and inflammatory action which we term Surgical Fever in the surgical patient, and Puerperal Fever in the puerperal patient.

2. ANALOGY IN THE PATHOLOGICAL NATURE OF PUERPERAL AND SURGICAL FEVER. Two opinions were formerly held as to the nature of Puerperal Fever: 1. That it was an idiopathic or putrid fever, *sui generis*; 2. That the disease was essentially a local inflammation, of which the fever was merely a consequence, and that the appropriate treatment was by venesection and active antiphlogistics. The first of the doctrines was generally abandoned

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[1] Fifth Report of the Registrar-General, p. 380. DR. FERGUSON'S "Essays on the Most Important Diseases of Women", p. 1. KIWISCH, in British and Foreign Review, vol. xiii, p. 3.

[2] Edinburgh Monthly Journal, 1847, p. 238.

as pathological anatomy advanced, because local inflammatory lesions, discovered after death in the uterus, peritoneum, and chest, were too frequent and too decided to be explained by the doctrine of a previously existing fever alone. Again, the idea of the disease being essentially a local inflammation, has been disproved, from its being found, 1. That there is no general uniform relation between the intensity of the local inflammatory lesions and the attendant fever; 2. That the supposed cause, simple peritonitis or metritis, may exist without exciting the symptoms of Puerperal Fever; and 3. That true and fatal Puerperal Fever may occur, without leaving on the dead body any traces of the local inflammation which had been considered the origin of the disease. Thus, whatever be the site of the local inflammation to which Puerperal Fever has been attributed, cases of genuine and fatal Puerperal Fever have been observed, in which each of these supposed causes has been absent.

Some authors, maintaining the disease to be a symptomatic fever, hold that the inflammation on which it depends may be seated in different parts in different cases, and in different epidemics, originating in one case, in metritis, in another, in peritonitis, and so on.[1] But occasionally, though very rarely, no inflammatory lesions whatever are found.[2] Hence most of our best pathologists have rejected the idea of Puerperal Fever being either a fever *sui generis*, or symptomatic of a local inflammation, and have been inclined more and more to ascribe the disease to a *toxæmia*, or morbid state of the blood. The injection of pus, and other morbid matters, into the blood of the lower animals, produces symptoms during life, and lesions found on the dead body, very analogous to those of Puerperal Fever. Similar effects are produced by the mixture of pus with the blood in the human subject, in cases of phlebitis, etc. Facilities for the access of pus to the circulation, after parturition, exist in the orifices of the utero-placental veins, in the inoculation of morbid and contagious matters upon the abraded surface of the vagina, and in the transmission, by continuity, of accidental inflammations from the lining membrane of the maternal passages, through the open orifices of the veins, along the lining membrane of these vessels. Under the view that Puerperal Fever is of toxæmic origin, we can more easily explain the relation of its two elements, viz., the febrile action, and the internal inflammation. For we see that the fever is not itself the cause of the attendant inflammations, nor these inflammations the cause of the fever: but that both the fever and the inflammations are the simultaneous effects of one common cause, namely, the vitiated condition of the general circulating fluid. The same doctrine enables us also to see how, in one epidemic, the febrile, and in another, the inflammatory element, may be more prominent.

These views of the pathology of Puerperal Fever are borne out by what we see in Surgical Fever and its inflammatory results, among the internal viscera of the body; for no pathologist has ventured to maintain, that the pleurisy or peritonitis, which we often see in the bodies of patients who have died of Surgical Fever, is the consequence of that fever; or that the fever itself is a consequence of these local inflammations. These local phenomena are no longer held to be explicable by the doctrine of sympathy or metastasis; and few now dissent from the idea that we are to look for their origin, and for the origin of the attendant fever, in some diseased condition of the blood. Whether this consists in the presence of some one or more of the elements of purulent matter alone; or whether other animal secretions may be its common or occasional cause, and its effects may not be regulated by differences in the diseased material which is present in the circulation, are questions which more advanced research may yet determine.

III. Analogy in the Internal Pathological Lesions left by Puerperal and Surgical Fever. Both are liable to leave upon the dead subject

[1] Tonnelle. Archiv. Gén. de Méd., vol. xxii, p. 350.

[2] Locock, in Library of Medicine, Art. "Puerperal Fever", vol. i, p. 351.

evidence of recent acute inflammation, generally characterized by an unusual tendency to the effusion of loose coagulable lymph and pus. Thus Dr. Chevers found, in 134 out of 153 cases fatal after surgical operations in Guy's Hospital, the immediate cause of death to have been acute inflammation in one or more of the internal organs ; and, no doubt, in all of them, the usual symptoms of Surgical Fever were more or less perfectly marked during the last days of life. Similar results have been observed in cases of death from Puerperal Fever, as illustrated by the tables of Dugès and Tonnellé. The internal inflammation, in the same case, generally affects two or more different, sometimes very distant viscera, either simultaneously or in succession. The principal seats of inflammation are often far removed from that of the original lesion. Thus, pleurisy is very frequently the result both of a surgical operation and of Puerperal Fever, and pneumonia is especially frequent after surgical operations.[1] In obstetric cases, the uterus, uterine appendages, and peritoneum are, however, the most constant seat of the internal inflammation, just as all kinds of wounds of the pelvic and generative organs are particularly liable to be followed by peritonitis, when they give rise to Surgical Fever. In Midwifery cases, not only is the uterus, the seat of the original wound, liable to inflame, but the morbid action readily extends, by continuity of tissue, to its appendages and to the peritoneum. The pelvic viscera, moreover, have been the immediate seat of injury during parturition, and the inflammation is prone to attack any weak or injured part. Might we, in any case, regulate in any degree the principal site of the secondary inflammatory effusions in Puerperal or Surgical Fever, by lowering the vitality of a selected portion of the surface of the body ?

IV. Analogy in the Symptoms of Puerperal and Surgical Fever. The type and severity both of Surgical and of Puerperal Fever are very variable. The varieties of the latter are described as the inflammatory, the bilious, the gastro-enteric, the nervous, etc. But when either disease is fully marked, the symptoms are sufficiently striking and similar : as rigors, a pulse varying in strength but always rapid, an altered hue of the surface, which is frequently darker, or almost icteric ; the skin hot and dry, or bathed in perspiration, or these states alternating, without any material crisis in the febrile action : local pains, and functional derangements in the parts which are the seat of the internal inflammatory effusions, while the local symptoms of the local inflammations are often very masked and latent ; anxiety and general prostration, adynamia ; very frequently nausea and vomiting, occasionally diarrhœa; and latterly, laboured or hurried respiration ; sometimes sudden swellings and effusions of the joints and subcutaneous tissue ; and often at last rapid sinking, with or without delirium. There is no disease in which it is so difficult to assign pathognomonic phenomena as in Puerperal or in Surgical Fever. But whoever has seen much of the disease in one class of patients, has no difficulty in identifying it in the other class.

The discovery of any measure for the prevention or cure of Surgical and Puerperal Fever would save numerous lives, and form a most important era in the march of professional discovery. We already know various conditions capable both of increasing and decreasing the intensity of this affection. The disease is more common and severe in towns than in the country,[1] in hospitals than in private practice, in crowded wards than in those where the patients are few and the supply of fresh air ample. In some epidemic states, in some localities, and in some states of the economy, it is much more fre-

[1] Erichsen, Professor, in Med. Chir. Trans., vol. xxvi. Dupuytren, Révue Médicale, 1826, vol. iv, p. 418. Addison, Dr. Thomas, in Guy's Hospital Reports, 1843, p. 83.

[2] Out of a town population of about 1,800,000, 3195 died in child-bed in four years ; and in about the same amount of rural population, there died only 1806 mothers. Mr. Farr, in Registrar-General's Fifth Report, p. 400.

quent than in others. Patients suffering under internal organic diseases, particularly of the abdominal viscera, and under certain functional derangements of the kidney, and perhaps of other organs, are specially liable to be attacked with this consecutive fever and inflammation. In addition to the common antiphlogistic remedies, special prophylactic measures have been proposed when Puerperal Fever is epidemic, as large and repeated doses of quinine, chlorate of potash, etc., before or immediately after delivery. This is a line of inquiry deserving further careful investigation. Some surgeons subject their patients to previous regiminal and medicinal preparations, but the exact power and propriety of these and other measures are not precisely ascertained. With regard to Puerperal Fever, few practitioners in this country have any doubt of the propriety and efficacy of those measures, which are calculated to prevent the medical practitioner or the nurse being the unhappy medium of carrying the contagion of the disease from one puerperal patient to another. There is amply sufficient proof that puerperal women may be inoculated with a *materies morbi* capable of exciting Puerperal Fever; that this *materies morbi* may be introduced into the dilated and abraded lining membrane of the maternal passages during delivery, by the fingers of the attendants; that the *materies morbi* most capable of being thus inoculated, and of generating the disease, seems to be the inflammatory products effused upon the serous or mucous surfaces of females who are suffering under Puerperal Fever, or who have died of it; and lastly, that other inflammatory effusions, when inoculated into the puerperal female, appear to have sometimes the same effect, such as the effusion into tissues, which are the seat of an asthenic, erysipelatous, or gangrenous type of inflammation. Every available caution should be taken against propagating the disease in this manner. The omission of these precautions, it is sincerely believed, has proved the cause of many deaths in child-bed, and continues still to do so, particularly on the continent of Europe. In the large hospital of Vienna, out of 21,120 women delivered from 1840 to 1846, 2260 died, or about 1 in every 10 mothers delivered, perished chiefly from Puerperal Fever. Latterly, this mortality has diminished so far, that in 1848, not above 1 in 74 died. This great change was effected by the adoption of means to prevent the contagion being transferred by the medical attendants and students, the mortality diminishing immensely and immediately from the time (May 1847), that the assistant-physician, Dr Semmelweis, prevented students from touching parts at the autopsies, and directed all of them to wash their hands in a solution of chlorine before and after every vaginal examination.[1] Was not the want of a due knowledge of the communicability of Puerperal Fever the cause immediately leading to these numerous maternal deaths? Were these mothers not sacrificed merely to medical prejudice, in the form of a total disbelief, on the part of our own continental brethren, in the contagious communicability of Puerperal Fever? And lastly, if Puerperal Fever be occasionally produced by inoculation, may not Surgical Fever be sometimes communicated in the same way?

The Dublin correspondent of the *Medical Times* for December 14th, makes the following remarks, in referring to Dr. Simpson's memoir:

The idea of the identity of Puerperal and Surgical Fever has been long held in Dublin, and is by no means new. The view was well put forward not long since, by Dr. Henry Kennedy, at the Dublin Obstetrical Society. The uterus Kennedy looked on, after delivery, as a large open wound; amputation, so to speak, of the mass of the placenta having taken place. At particular seasons, Puerperal Fever is more fatal. There is a large group of diseases, he thinks, to which it belongs, typhus, the exanthemata, diffuse

[1] Wieger, in Rev. Medico-Chir., vol. vi, p. 136. Routh, in Med. Chir. Trans., vol. xxxii, p. 27.

phlegmon, erysipelas, dissection wounds, etc. Kennedy, with Fergusson, is of opinion that the disease is rendered fatal by the formation of a poison in the system of the patient herself. He thinks the disease *then* becomes contagious, and may be carried by a third party, as a student, or midwife. In his own practice, a woman in perfect health was confined in a room adjoining one where there was a bad case of typhus. She suddenly got Puerperal Fever, and died. Kennedy has also seen the dark mulbery *vibices*, or spots of typhus, in Puerperal Fever. The fever is the chief thing to contend against in the treatment, not the peritonitis, he says, which is only secondary: he is accordingly against the system of bleeding; and mercury, where the system is deeply poisoned, he thinks quite as inadmissible.]

SUDDEN DEATH SEVEN HOURS AFTER DELIVERY: AIR FOUND IN THE HEART.

Professor Samuel Berry, of Queen's College, Birmingham, relates, in the *Provincial Medical and Surgical Journal* for November 27th, 1850, the case of a woman who died suddenly after delivery, and in whom, on post-mortem examination, air was found in the heart. There is by no means sufficient proof that the entrance of air into the veins was the cause of death; as may be inferred from a comparison of the case with the views advanced by Dr. Cormack, in this Journal, for October 1850, and with the experiments and observations of Amussat, Wattmann, Erichsen, and others. We give the case, however, as it is possessed of some interest.

Case. A woman, primipara, aged 22, had a favourable delivery; the placenta was expelled, with little loss of blood, at 20 minutes past 7 p.m. She appeared to be going on well until 1 a.m. the following morning, when she became affected with difficulty of breathing and faintness, and expired before the arrival of her medical attendant, Mr. Dyer, about an hour afterwards. On a *post-mortem* examination, performed the next day, the lungs were found congested, and there was air in the heart, which was of the size of a male heart, and apparently distended. Upon making an incision into it, a gush of air escaped, and the organ became flaccid: no blood was found in its cavities. The uterus was found empty, and the vessels, where the placenta had been attached, were patulous. The vagina contained, at its upper part, a moderately-sized clot of blood. Mr. Berry gives the following explanation of the case: The uterus, after the removal of the placenta, contained a clot of blood, which, by the contraction of the uterus, was forced into the vagina; when the uterus was relaxed, air was drawn into the cavity, the clot on the vagina prevented the air from passing out of the uterus, and the mouths of the uterine veins being patulous, it was forced into them, and then passed into the general venous circulation. The entrance of the air was gradual, he believes, and therefore occupied some time before it reached the heart in sufficient quantity to give rise to those symptoms of obstructed respiration which soon terminated in death.

KEY-TSI-SING, A JAPANESE REMEDY FOR STERILITY AND SUPPRESSED CATAMENIA.

In our number for November last, p. 1083, we noticed a Japanese remedy, introduced (through the *Lancet*) to the notice of British practitioners by Dr. E. Williams. We find a second eulogy of the medicine by Dr. Williams in the *Medical Times* of December 21st, supported by the details of a case of suppressed catamenia, in the practice of Dr. White of the Winchester County Hospital. As Dr. E. Williams states, that forty-seven practitioners have testified to him in favour of the beneficial effects of the drug in suppressed catamenia, we think the present publication of a single case ill-advised. When the results of the trials of the forty-seven practitioners referred to are laid *in extenso* before the profession, we will state the results to our readers.

THE HOSPITALS OF LONDON.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

INTRODUCTORY REMARKS.

Under this head we propose, from time to time, to offer a series of facts and observations regarding the London Hospitals. Our object will be, not so much to give details of individual cases (although these, if interesting, will not be excluded), as to furnish an outline of the statistics of the Institutions, of the practice of their different physicians and surgeons, and of the system of instruction pursued by each of them.

The paramount importance of clinical instruction has always been insisted upon in this journal; and we are happy to observe that the Court of Examiners in the Society of Apothecaries have, in their last curriculum, (published in the beginning of 1850,) made an attempt to place this branch of medical tuition on its proper footing; and no one who is acquainted with the excellencies and defects of our present system of medical instruction, can doubt that the Court of Examiners have exercised a sound judgment in this particular. Our only regret is, that the other medical corporations, especially the University of London and the Royal College of Surgeons of England, have not yet thought it necessary to follow so good an example.

With the view of aiding, as much as possible, the efforts of those who are endeavouring to promote a better system of clinical instruction, we propose to state, as far as our information extends, the various methods pursued of the London Schools of Medicine. On the present occasion, we present to our readers some particulars connected with the mode of clinical teaching adopted at Guy's and at University College Hospitals: which we have no hesitation in stating are both admirably regulated Medical Schools. We also give a short notice of the North London Eye Infirmary.

We give these Hospitals priority only from adventitious circumstances. It is no part of our plan to advocate the interests of any particular Schools, or any particular set of Teachers; we are anxious to do justice to all; and, as far as lies in our power, to make the stores of medical knowledge contained in our great hospitals, available to the medical community. Deeply sensible of the liberality which characterises the Hospital physicians and surgeons of London, we acknowledge with gratitude the zeal which they have evinced in placing within our power the means of communicating a vast mass of useful information: and it is our earnest desire, in return for the confidence reposed in us, to make the department devoted to the Hospitals of London one of the most useful features in this Journal.

We are by no means insensible of the valuable services rendered to Clinical Medicine by our weekly contemporaries; and our readers will perceive that it is no part of our plan to supersede their truly excellent reports. To the *Lancet*, special praise is due for having commenced effectively these valuable communications.

GUY'S HOSPITAL.

Guy's Hospital in the Borough of Southwark was founded at the sole cost of Thomas Guy in the year 1727. The hospital school, which was at one time connected with that of St. Thomas's Hospital, has now been separated from it for many years, and is carried on by a distinct and complete staff of lecturers. The number of beds amounts at present to 580, a considerable increase on the number originally determined upon by Guy. This extension

of the hospital was the result of a munificent bequest by the late Mr. Hunt, who left a sum of £200,000, to be devoted to the purposes of the institution.

The large number of patients constantly in the hospital affords great opportunities and advantages, for the instruction of pupils in the practice of medicine, surgery, and midwifery. The arrangements for carrying out this object are as follows. The general service of the wards is conducted on the ordinary plan, each physician being attended by four clinical clerks, (students of the second or third year) who report the cases coming under treatment, and each surgeon being followed by four dressers, and four surgical reporters for the like purpose. During the six winter months of the year, from October to the end of March, the medical and surgical *clinical wards* are open; forty beds are devoted to this service for the physicians, containing twenty-two male and eighteen female patients. The six months are equally divided, each physician taking the wards for two months, during which time he lectures once a week on the cases admitted. Clerks for the clinical wards are selected from among the most assiduous pupils of the third year, and the same rule is adhered to in the selection of dressers. The surgical clinical cases are distributed, and selected from cases in the surgical wards; the clinical surgeon for the time being having the liberty of selecting such as he may choose from all the cases admitted. For these cases there are special reporters, and the surgeon who takes the clinical duty for two months, lectures once a week during that period on the cases requiring notice. In this way it will be observed, that while arrangement is made for reporting all the cases contained in the hospital, the clinical wards and other selected cases supply matter for clinical lectures during the winter session. One great advantage of these arrangements, consists in the means they afford of obtaining a knowledge of the capabilities of students as reporters, while labouring in the general wards, so that the care of the selected cases devolves on those who are not only the best fitted to report, but also to have the care of patients suffering from the severer forms of disease. The Eye Wards, male and female, containing thirty beds, under the care of the ophthalmic surgeon, are open all the year round, clinical lectures being delivered during the summer.

Clinical instruction is also given by the physician-accoucheurs—Dr. Lever and Dr. Oldham—who have twenty beds in the hospital for the reception of women suffering from diseases of the uterus. Two clinical clerks, selected for the most part from students of the third year, attend upon these cases and also assist the physician-accoucheur with the out-patients of this department, which average 160 each week.

For the purpose of teaching practical midwifery, a house has been appointed in the hospital for the residence of three students, who take office under the following conditions. There is a senior, second, and third; the youngest is in attendance for *a fortnight*, during which time he attends all the ordinary cases which occur, amounting to from twenty-five to thirty cases. Having performed this duty satisfactorily, he is eligible for the appointment as second, who has allotted to him such cases as from circumstances may be known to present abnormal conditions: this duty he performs for a month. If his attendance has been satisfactory, he is chosen to the office of senior, whose privilege it is, under the sanction and in the presence of one of the physicians, to perform the operations of turning, applying the forceps, etc., or if capable, he is permitted to undertake, with their sanction and in their presence, any required operation. He resides for two months, and is responsible for the regularity of the others, and assists them in cases requiring particular attention. The cases are attended at their own homes, books being kept in which the names of women are entered, with the time at which they expect to be confined, and such other particulars as may be thought necessary. The annual number attended is about 1400.

During the time the clinical wards are closed, a clinical lecture is given once a week by one of the three assistant-physicians, Dr. Hughes, Dr. G. O.

Rees, and Dr. Golding Bird. These lectures include the subject of Diseases of Children, a children's ward containing beds being open all the year round, under the care of one of the assistant-physicians.

Clinical lectures are thus delivered during the whole year on Medicine, Surgery, Ophthalmic Surgery, and the Diseases of Women and Children. It may be stated, that in order to secure the undivided attention of the physician for the clinical wards in the winter session, each physician, on taking that duty for two months as before-mentioned, deputes his assistant-physician to undertake the service of the general wards.

The general management of this plan of instruction is under the superintendence of a clinical censor, who keeps lists of the clerks to each medical and surgical officer, and a register of those who, from standing and capability, are fitted for the offices of reporters or dressers. Further particulars regarding Guy's Hospital (to secure accuracy), we defer to a future occasion.

UNIVERSITY COLLEGE HOSPITAL.

University College has taken the initiative in clinical teaching, as in many other branches of education. Eleven years ago, for the first time in any English medical school, distinct professors were appointed, whose special duties were to superintend the practical training of students at the bed-side of the sick. In common with all the British schools, clinical instruction had been previously given by the several physicians and surgeons of the hospital; but by the institution of distinct professorships, the amount and efficiency of this teaching was extended. The clinical duties of the medical officers were not abolished, but the old system was developed and perfected.

Dr. John Taylor (now of Huddersfield) was the first Professor of Clinical Medicine, and Mr. Liston the first Professor of Clinical Surgery in University College. Dr. Walshe and Dr. Parkes have been, successively, the successors to Dr. Taylor; and Mr. Quain now holds the chair once filled by the greatest operator of modern times.

We have already said, that the clinical duties of the physicians and surgeons were not superseded by the creation of special clinical professors. Thus, for example, Dr. Walshe, Dr. Garrod, and Dr. Murphy, the three other physicians to the hospital, are still termed in the Prospectus, *Clinical* Professors, and are expected to give instruction at the bed-side; so also Mr. Erichsen is Clinical Professor of Surgery. But these professors are not expected to bestow the same amount of labour on their pupils as the special clinical professors. On Dr. Parkes devolve the duties of practically teaching the stethoscope, the art of percussion, the method of examining the urine, etc., in addition to pointing out the general phenomena of each case; and Mr. Quain's duties embrace corresponding practical instruction in surgery. In addition to the officers above mentioned, the Council have recently created a chair of Ophthalmic Surgery, and this is now occupied by Mr. Wharton Jones. Courses of instruction in Dental Surgery have been for some years given by Mr. Durancé George.

The Hospital contains 120 beds, of which about one-third are devoted to surgical cases. Into the medical side, the worst cases only are admitted, out of the great number always applying for admission; so that the examples of disease presented are of extraordinary severity as compared with the average of the cases in the large hospitals.

Confining ourselves on this occasion to the medical side, we find that the usual mode of examining patients, and dictating in a loud voice to clinical clerks,[1] has been adopted in this hospital ever since it was opened. This plan, which originated in the Edinburgh School, can never be superseded, and of itself is of great use, as placing before every student phenomena with whose

[1] The Clinical Clerks are students who have distinguished themselves for intelligence, industry, and good character.

characteristics he may subsequently make himself acquainted by personal investigation of the patient. In University College Hospital, the cases are taken with extreme minuteness and care.

The following is the plan which Dr. Parkes, the present clinical professor, has used since his appointment :[1]

A. GENERAL PREVIOUS HISTORY.

1. *Name*—age—place of birth—place of usual residence—how long in London—general health of parents, brothers, sisters, and other relations—mode of death of ditto.
2. *Conformation and appearance when in state of health*—height—weight—make of body (tall—slight—short—square, etc.)—colour of hair and eyes—temperament—habitual state of mind—cheerful—melancholy, etc.
3. *Trade*—sedentary or active—in or out of doors—how many work-hours per diem.
4. *General mode of life*—lived well or badly—amount of meat and fresh vegetables—temperate or not—amount of liquor and of what kind—tobacco—clothing—personal cleanness as to baths, etc.—exposure to weather—how much sleep—number of persons in same room—married or single—how many children—place of abode—humid, dry, well, or badly drained, etc.
5. *Previous health in general terms*—good—bad, etc.

If a female—catamenia, at what age appeared first—second appearance—when quite regular—regular or not since—scanty or profuse—how many children or abortions—labours easy or the reverse—any flooding—suckled her own children—when catamenia ceased.

6. *Previous Diseases*—(The patient should be first asked to enumerate them, afterwards special inquiry should be made as to the following, viz.)

Small-pox—cow-pox—pertussis—scarlatina—measles—rheumatism, acute or chronic—rheumatic or neuralgic pains—palpitation of the heart—winter cough—hæmoptysis—epistaxis—hæmatemesis—indigestion—piles—syphilis, primary or secondary—gonorrhœa.

Accidents, as blows—strains—heavy falls.

B. SPECIAL PREVIOUS HISTORY.

(*i. e.* of the disease for which advice is sought).

Exact date of commencement. Then the symptoms should be taken down as nearly as possible in the patient's own words.

C. PRESENT STATE.

(*a.*) The patient should be called upon to state what he feels to be the matter with him. Answers should be taken down in his own words. No leading questions should be asked.

(*b.*) The patient should then be questioned concerning the following subjective symptoms, supposing that they have not been mentioned :—Pain—aching and soreness—feelings of uneasiness or prostration—flushes—coldness or shivering—tingling or burning—alterations of vision—hearing—touch—taste or smell—numbness of extremities—altered or impaired cutaneous sensibility—dyspnœa—desire to cough or cough—palpitation—choking—dysphagia—degree of appetite—thirst—nausea—desire to micturate—griping—tenesmus, etc.

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[1] Dr. Parkes has informed us, in answer to our application to be permitted to publish his plan, that he has been obliged to sacrifice exact scientific arrangement, in order to make the examination as direct and short as possible, for the convenience of the physician as well as of the patient. But it is quite easy afterwards to bring together all symptoms connected with any organ, as for example, the lungs, if an exact arrangement be required.

(*c.*) Objective symptoms (including any subjective symptoms which it is inadvisable to sever from the objective symptoms).

In noting these symptoms, it is advisable, in fevers and general constitutional diseases, to go regularly through the following list; but in other cases the examination may be commenced with that part of the body to which the previous examination has seemed to point as the seat of the disease; for example, great palpitation, dyspnœa, and pain in the cardiac region, should be followed by examination of the heart; cough and hæmoptysis, by that of the lungs, etc.

1. General Objective Symptoms, including a short description of the attitude, manner, aspect of the patient—emaciation—muscular strength—paralysis—twitches—convulsions, etc. Also at this time, before the patient is stirred, the pulse at the wrist and the respirations should be counted.
2. Surface.
   (*a.*) Colour of skin.
   (*b.*) Spots—sudamina or eruption of any kind.
   (*c.*) Dry or moist—if moist, perspiration acid or alkaline—smell.
   (*d.*) Temperature of skin (in axilla and groin).
   (*e.*) Œdema—flaccidity—rigidity of limbs.
   (*f.*) Superficial veins.
   (*g.*) Conjunctivæ—irides—cheeks—expression.
   (*h.*) Colour of lips and inside of mouth, including tonsils, tongue and palate; temperature; quantity and reaction of saliva.
   (*i.*) Joints.
   (*k.*) Nails.
3. Head—form of head—circumference—breadth—intellect—hearing.
4. Larynx—front of neck generally, pulsation in neck, venous or arterial, etc.; voice—tracheal rhonchus, etc.
5. Examination of front of Chest and Abdomen—(Patient recumbent).
6. Chest.
   (*a.*) General shape, etc.—degree of prominence of clavicles—post and infra-clav. spaces—post-sternal space—any general or partial bulging or retraction, etc.—width of intercostal spaces.

Lungs.

   (*a.*) Expansion as ascertained by the eye and hand—intercostal spaces marked or not in full inspiration—full expiration—relative duration of inspiration and expiration.
   (*b.*) Expansion as ascertained by the chest-measurer.
   (*c.*) Measurement of chest—circumference immediately below axillæ—right and left—full expiration—full inspiration.

At point of ensiform cartilage—full expiration—full inspiration.

Sterno-clav. to nipples—middle line to nipples.

   (*d.*) Vocal fremitus—in infra-clav.—mammary and lateral regions—friction or rhonchal fremitus—purring tremor or thrill of any kind.
   (*e.*) Percussion—post-clav.—clav.—infra-clav.—first on one, then on the other side—post-sternal—sternal throughout—mammary—infra-mammary—axillary—infra-axillary.
   (*f.*) Respiration—in same regions above—distinguishing between inspiration and expiration, in easy, deep, and tussive respiration.
   (*g.*) Voice in same parts.

Heart.

   (*a.*) Apex—place where—kind and strength of impulse—whether any pulsation elsewhere—purring tremor, undulation, etc.
   (*b.*) Percussion note of 1st, 2nd, 3rd, 4th, and 5th left cartilages and 4 first interspaces, as compared with right side—percussion for inner or right line of cardiac dulness; then for the outer or left line—shape of dulness.
   (*c.*) *Sounds*—2nd right cartilage—2nd left—midsternum—apex—point

of ensiform cartilage—outside left nipple—top of sternum—in neck —is there any friction ?

(In cases of diseased lungs and heart, mark sounds of heart all over chest, front and back.)

The first and second sounds must be listened to separately.

7. Abdomen.

(*a.*) Shape—circumference round navel, if there be any abdominal disease—resistance of walls—tenderness.

(*b.*) *Liver*—upper and lower edge in full expiration and inspiration—height of liver (also length of trunk from upper edge of sternum to pubis)[1]—can edge be felt ?—is it rough—smooth—round—sharp, etc. ?

(*c.*) *Spleen*—size by percussion—auscultation for splenic murmurs.

(*d.*) Percussion of abdomen generally, marking out if any dull parts.

(*e.*) Auscultation if necessary—temperature if abdominal disease present.

Special examination for tumours—fluctuation.

8. Examination of the Back.

(Patient sitting up with the arms crossed.)

General Inspection—supra-spin. fossæ—movements of ribs by eye and chest-measurer—general or partial bulging—dorsal arch—curvature of spine—tenderness of spine.

Vocal fremitus.

Percussion—supra-spinous fossæ—infra-spinous—interscapular angles of scapulæ—bases—mark out lower edge of lungs—auscultation for respiration and voice in same regions.

Examine loins and mark out kidneys by percussion—grasp kidneys.

9. Excretions.

Expectoration—quantity in twenty-four hours—colour—consistence—form —surrounded with thin fluid or not—aërated or not—microscopic characters—reaction.

Urine—quantity in twenty-four hours—specific gravity—reaction—appearance and colour—does it contain albumen—sugar—bile ?—quantitative analysis.

Sediment—character to naked eye—microscopic examination—chemical tests.

Fæces—number of stools—quantity—colour—reaction—microscopic characters.

10. Blood—microscopical and chemical examination—physical appearances —of clot and serum—reaction, etc.

In certain cases, examination of uterus by touch and speculum—of anus and urethra.

In cases in which it is not possible to go fully into the examination, after a short general previous history, the special previous history should be followed by an examination into the part to which the symptoms point as the seat of the disease ; then in addition to the usual subjective and objective symptoms, the following points may be more or less closely examined :—

1. The apices of the lung in front and behind.
2. The sounds of the heart.
3. The condition of the abdomen as to fulness, tenderness, etc.
4. The state of the urine and fæces.

Dr. Walshe's method differs from this, in the minuteness with which the circumstances connected with the previous health and condition of the patient are recorded.

The clerks not only take down the cases to the dictation of the physician, but on them devolves especially the examination of the urine. In every case, the quantity of urine passed in twenty-four hours is recorded ; the

[1] This point is merely inserted to aid an inquiry in which Dr. Parkes is at present engaged.

urine is tested for albumen, sugar, and bile, and the microscopic characters of the sediment (if any) are noted.[1]

The minute accuracy with which the cases have been taken in University College Hospital for a number of years by the successive physicians, has led to the accumulation of an immense number of complete histories of disease in the hospital registers. But the immediate effect on the mind of the student of this careful investigation, is still more important. He receives at once the lesson, that those who have from their vast opportunities become most conversant with disease, yet deem the severest scrutiny essential before they pronounce on the nature of the affection they have before them. He is at once taught, that an accurate diagnosis is the great aim of his teachers, and that the successful attainment of this object requires on their part no slight labour and consideration. And in the extraordinary success with which the exact condition of organs can be often determined, the student will learn that this labour and consideration may meet with ample reward, as he may, on the other hand, perceive, in the errors which must occasionally occur, that there is yet room and verge enough for amplification and correction in the mode of investigating disease. Clinical lectures are delivered twice a week by the special Professor of Clinical Medicine, and once a fortnight by each of the other physicians. In these lectures, each case is reviewed after its termination ; or, as we understand is Dr. Parkes's present plan, the cases while still in hospital, particularly those likely to have a fatal termination, are minutely considered, so that the students may have frequent opportunities of comparing symptoms and *post-mortem* lesions, and of observing how far the grounds for the diagnosis have been found valid.

In addition to clinical lectures, the physicians are in the habit of lecturing upon cases at the bed-side, and the pupils are also called upon, as far as the time will permit, to examine the patients for themselves. But, in the space of time which can be devoted to the visit, it has been found impossible to give the student sufficient instruction as to the manner of conducting this examination. It was for the purpose of supplying this deficiency, that the special Professorship of Clinical Medicine was founded.

The increased accuracy of diagnosis which is becoming so conspicuous a feature in the profession, is owing to several causes, but most particularly to the cultivation of various kinds of physical examination. In cases in which the ancient physician, or even the physician of sixty years since, depended for his diagnosis chiefly on the symptoms derived from the sensations of the patient, or on the few objective symptoms which were appreciable by him (as, for example, the state of the skin, the tongue, the expectoration, the pulse, or the physical appearance of the urine) the physician of the present day brings to bear a host of appliances for a closer investigation. He measures, he percusses, he listens, he weighs, he has recourse, in fact, to a number of means by which he ascertains the state of the patient, without a word being uttered by either party. Within the last few years, fresh modes have become available ; and the microscope and the test-tube have come into daily use in the chambers of the sick. So important and so accurate is the information which the combined use of these methods gives, that it is not too much to assert, that he who can avail himself of these aids to physical diagnosis, need not fear to affirm the diagnosis after a proper investigation, in almost all general diseases, and in the infinite majority of local chest and abdominal complaints, and in many head affections which come before him.

The acquirement of these several methods is a study, which we have yet

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[1] We have not alluded to the office of Physician's Assistant, which in University College is filled by old students, who are elected every six months by *concours*. It is a post of great importance, and very instructive to those who hold it.

to see take its place by the side of those which are deemed most essential to the education of a physician. What his dissections are to the anatomist, or his balance and test to the chemist, or his measurements and calculations to the astronomer, so is his stethoscope, his measurer, his test tube, his pleximeter, his speculum, or his microscope[1] to the practising physician. They are his tools, his implements of labour; and unless he learn to use them, he would, with all the theoretical knowledge in the world, be like, when brought to the bedside of the sick, an anatomist who had never touched a scalpel, or an astronomer who had only read of telescopes. And it may be safely asserted, that the student who can use well these modern appliances, will be able, after he has seen only a small number of cases of disease, to make a more accurate diagnosis, than the old routine practitioner, whose so-called "experience" consists only in the inaccurate observation of multitudes of patients whose diseases he never fully comprehends.

Each physician in University College Hospital is, of course, a clinical professor; but those who are not the special professors, necessarily and most usefully tend, in their instructions, towards that point where lie their favourite studies. Thus, Dr. Walshe (in addition to the usual general instruction concerning the course of nature and treatment of diseases) is most full and explicit in all information relating to physical examination. Dr. Garrod, on the other hand, is rather led, by the prevalent nature of his studies, to consider more closely the chemistry of the fluids, and the action of medicines, etc. Dr. Murphy, again, gives practical instruction in the use of the speculum, and other means which are used in the examination of the female organs.

The duties of a clinical professor, however, embrace the whole range; and he should be at once competent to use the stethoscope and the speculum, to analyze blood or urine, and to distinguish, under the microscope, the histological elements which most especially aid in diagnosis.

In order to teach the principles of physical diagnosis, the special Professor of Clinical Medicine gives, to small classes, practical instruction at the bedside, on the position and movements of organs, on the stethoscope, the art of percussion, measurement, etc. Each of these courses which have been regularly given since the foundation of the chair, occupy about six or eight weeks, a space of time in which the principal facts can be mentioned and illustrated; so that, with the necessary labour which every student must bestow upon his own improvement, a competent working knowledge may be acquired. The applications of chemistry and microscopy to diagnosis, are brought forward as occasion may arise.

The *post-mortem* examinations are conducted by the physicians, who dictate aloud to the clerks the morbid alterations. This is, we believe, a better plan for the instruction of students, than leaving the *post-mortem* examinations to a special officer, who does not necessarily see the patients during life.

In order to encourage students to examine patients for themselves, and to commence the necessary training of those powers of observation which are to be so largely exercised in after life, gold and silver medals are awarded, every winter and summer term, to the authors of the best series of cases.

Such are, we believe, the means of instruction at University College Hospital. Altogether, the system pursued is a good one; and it will most probably be rendered still more efficient, as the officers of the hospital confess that there exist deficiencies in their method, and are constantly endeavouring to remedy them.

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[1] It is evident, that as the applications of chemistry and the microscope to medicine develop themselves, the special assistance which these methods give to diagnosis, will become a distinct branch of tuition, that is to say, distinct from the general subject of the chemical and microscopic histories of disease. At present, however, the subject is too little advanced to permit this to be done.

NORTH LONDON EYE INFIRMARY.

This charity was established eight years ago. In the annual report for 1850, it is stated that during 1849, 1214 patients were treated: of this number 913 are mentioned as cured, 111 as relieved, 27 as incurable, and 163 as under treatment.

The following is a summary of the 161 OPERATIONS:

Cataract—Extraction, 11—Solution, 19—Depression, 2 ...	32
Tumours	41
Obstructed Lachrymal Duct	8
Entropium and Ectropium	5
Artificial Pupil	4
Minor Operations	71
	161

The affairs of this Institution are regulated by a committee annually chosen from the subscribers. Mr. Dalrymple is consulting surgeon, and the attending surgeons are Mr. White Cooper, Mr. G. Pollock, Mr. Pyle, and Mr. H. B. Norman. There is a surgeon daily in attendance from 10 to 11 A.M., Sundays excepted. Patients suffering from severe diseases, or requiring operation, are admitted into the house at the discretion of the surgeons: and in very urgent cases, the patients are allowed at all times to apply at their private residences.

The general character of the treatment pursued at the North London Eye Infirmary, is that which was so efficiently practised by the late Mr. Tyrrell, at Moorfields. Careful attention is paid to the general health, and especially to the removal of the causes of disease; depletion, by the abstraction of blood, is very little practised, and violent escharotic drops and ointment are quite proscribed, having been found not only unnecessary, but pernicious. Observations have recently been made to some extent, on the utility of the *neutral acetate of lead in granular lids:* although undoubtedly of service, it is not found to work the wonders which some foreign writers have ascribed to it, but it is regarded, at the North London Eye Infirmary, as a very useful auxiliary to other treatment. Mr. White Cooper has been trying the newly introduced medicine, *sumbul*, and is well satisfied with it. He says that it is of decided service in cases of debility as a tonic and restorative. In combination with colchicum, he recently found the etherial tincture of sumbul, of essential service, in the case of a patient whose constitution had been greatly broken by a dissipated life, and seven mercurial salivations. Being severely attacked with arthritic sclero-iritis, the ordinary treatment failed to subdue the attack; but on a trial being made of the combination above mentioned, he rapidly recovered. The *hydrocyanic acid vapour*, which has lately been lauded as a remedy for cataract, in a Canadian work, is often used to remove corneal opacities, in which it is decidedly beneficial; but though tried, it has never been found to produce the slightest effect either upon cataract or amaurosis. *Cod-liver oil* is found to be extensively useful in strumous ophthalmia. Children recover rapidly under its use, with mild local treatment, and counter-irritation.

At the present time, catarrhal and rheumatic affections of the eye appear to be very rife, but yield readily to treatment. In rheumatic sclerotitis, bark and soda, with or without colchicum, is found extremely beneficial.

[*In future we propose to prefix to our first notice of each Hospital a complete list of its Medical and Surgical Staff.*]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

November 26, 1850.

Dr. Todd in the Chair.

Chorea attended by Softening of a portion of the Spinal Cord. By R. Nairne, M.D. The patient was a lad, aged 17, who had been, from the age of 12, the subject of occasional attacks of articular rheumatism, with endocarditis and other complications. He was seized with Chorea ; and was admitted into St. George's Hospital on the 27th of last June. He was somewhat relieved by the treatment for the first day or two ; he then became more restless, delirious, more feeble, and violently convulsed. Some hours before his death, the convulsive movements ceased, and he became comatose. On *post-mortem* examination, twelve hours after death, the veins and sinuses of the cranium and spine were found congested. About an inch of the entire thickness of the spinal cord, opposite the third and fourth dorsal vertebræ, was white, softened, and almost diffluent, the rest of the cord being in its natural state. The brain was firm, and injected with blood. The pericardium was adherent ; the mitral valve was fringed with small vegetations. The lungs were congested.

Dr. Nairne referred to four cases, in which softening of the spinal marrow had been found in conjunction with Chorea : but he did not think there was any reason for supposing that the latter was an effect of the former. He remarked that the fact of the existence of sensation, and the transmission of nervous impressions to the palsied muscles of the lower extremities, notwithstanding the softening of the cord, showed that we had yet much to learn respecting its functions.

December 10, 1850.

Dr. Addison, President, in the Chair.

Case Illustrating Difficulty of Diagnosis in Tumours of the Superior Maxilla. By Prescott G. Hewett, Esq. A young man, aged 25, was admitted into St. George's Hospital, in May 1848, under the care of Mr. Hewett, with a tumour in the situation of the Superior Maxilla, encroaching somewhat on the orbit, and extending into the pharynx : it had existed five or six years. The patient frequently had hæmorrhage from the nostril on the affected side. It was determined to remove the tumour, which was thought to arise from the antrum. During the operation, however, it was found that the tumour, which was fibrous, originated from the back of the nasal cavity, and compressed the antrum. It had entered the orbit through the sphenomaxillary fissure, and passed backwards into the sphenoidal sinuses. Chloroform was administered before the operation, and a very little during its performance. During the operation, syncope ensued, and the patient was laid down, and a stimulant given to him. When he had recovered, the operation was proceeded with ; but the syncope returning, the patient was carried to bed. The whole time occupied in the operation was twenty minutes. He recovered his consciousness, but remained in a state of collapse, and died about an hour after the operation. As there had been difficulty of breathing just before his death, the crico-thyroid membrane was divided, and artificial respiration performed, but without effect. When the membrane was divided, some frothy blood issued from the larynx. At the *post-mortem* examination, portions of the tumour were found adhering to the sphenoid bone. The

trachea and bronchi, down to their minutest ramifications, contained frothy blood, and there were spots of ecchymosis throughout the lungs, denoting that some of the blood had entered the air-cells. The author considered that the blood must have got into the lungs during the operation, and that the chloroform might have impaired the irritability of the glottis, so as to favour its admission. He would be deterred from employing that agent in future cases of this kind.

MEDICAL SOCIETY OF LONDON.

November 30, 1850.

J. Risdon Bennett, M.D., President, in the Chair.

Artificial Oviduct for the Cure of Ovarian Disease. By Mr. I. B. Brown. Mr. Brown exhibited a preparation taken from the second patient referred to at p. 1189 of this Journal for December 1850. Perfect adhesions had been established between the multilocular cysts, and the abdominal parietes. The uterus was healthy, and the other ovary free from disease. He had lately been informed, that the operation had been several times performed in Paris with success; but that adhesion of the abdominal parietes was effected by pinning the cyst to the walls of the abdomen some days before opening it.

Case of Cauliflower Excrescence from the Os Uteri: with Remarks. By Dr. Cormack. [This paper will be published as an original article in this Journal.]

December 7, 1850.

J. Risdon Bennett, M.D., President, in the Chair.

Crowing Inspiration in Infants. By Mr. Cox. The causes were considered under the heads of *predisposing*, *exciting*, and *proximate*. Among the proximate causes, Mr. Cox considered irritation of the trifacial nerves as most frequent. He believed that cutaneous diseases, such as eczema, were often the source of morbid action. He then made some remarks on the disease, contending that it consists in spasm of the laryngeal constrictors; and stated some objections to Dr. Ley's theory of its depending on paralysis. He endeavoured to trace an analogy between crowing inspiration and epilepsy, arguing—1. That the symptoms were identical in type: 2. That persons who in infancy are affected with the one, frequently become subjects of the other in adult age: 3. Epileptic patients often suffer from a suffocative spasm of the larynx at the onset of a seizure. In the symptoms, it was interesting to observe how distant parts of the diastaltic nervous system were affected; producing tenesmus, strangury, and obstinate closure of the sphincters. The remedies recommended were, chloroform during the paroxysm, citrate of iron as a tonic during the intervals, lancing the gums, and hydrocyanic acid to subdue the irritable condition of the spinal cord, after all sources of irritation connected with the excitor nerves had been removed. The dose of the latter remedy was a quarter of a minim three times a day to a child three years old, increased, if necessary, to half a minim. The author then read reports of twelve cases, nine of which had recovered under the use of chloroform and hydrocyanic acid. In one of the three fatal cases, there was aneurism of the arch of the aorta; and in another, there was myelitis, from a fall on the spine two months previously.

December 14, 1850.

J. Risdon Bennett, M.D., President, in the Chair.

Excision of the Head of the Femur. By Mr. Haynes Walton. The conclusion at which Mr. Walton arrived from an examination of this subject, was that there were cases of hip-joint disease, where the disease was limited to the

head of the femur, the acetabulum being healthy, or no longer implicated (that is, having recovered if it had been diseased), the head of the bone dislocated and lying in a sinus or abscess cavity, the patient sinking from external suppuration, there being no internal disease, or other manifestation of external local injury, in which the removal of the head of the femur would save life. He considered the operation, when the head of the femur was dislocated and lying loose, much less severe than is commonly imagined.

December 21, 1850.

Francis Hird, Esq., Vice-President, in the Chair.

Acranial Fœtus. Mr. Borlase Childs exhibited a fœtus, in which the bones forming the vault of the cranium were deficient, and the place of the brain was occupied by a spongy vascular mass, apparently loosely connected with the spinal cord.

Functional Paralysis. A paper on this subject was communicated by Mr. Edwin Lee.

MISCELLANEOUS INTELLIGENCE.

Royal Society. The Anniversary Meeting of this Society was held on Saturday, November 30th. The President, the Earl of Rosse, delivered the usual address. The Copley medal was awarded to Professor Hansteen, of Denmark, for his researches in astronomy; the Romford medal to M. Arago, for his numerous discoveries and improvements in optical science. The Royal medals were awarded to Professor Graham, of University College, for his contribution to the Transactions of a paper on the Motion of Gases through Tubes; and to Mr. Brodie, son of Sir Benjamin Brodie, for his paper on the Chemical Constitution of Wax. The following officers, whose names constituted the House-List, were elected for the ensuing year. President. The Earl of Rosse, K.P., M.A. Treasurer. Lieut.-Col. E. Sabine, R.A. Secretaries. Samuel Hunter Christie, Esq., M.A.; Thomas Bell, Esq. Foreign Secretary. Captain W. H. Smyth, R.N. Other Members of the Council. John Joseph Bennett, Esq.; William Bowman, Esq.; Sir Benjamin Collins Brodie, Baronet; The Rev. Professor Challis, M.A.; Lieut.-Gen. Sir H. Douglas, Baronet, G.C.B.; Sir P. de Malpas Grey Egerton, Baronet; John Forbes, M.D.; Marshall Hall, M.D.; Gideon A. Mantell, Esq., LL.D.; Professor W. A. Miller, M.A.; Sir Roderick Impey Murchison, M.A.; Richard Phillips, Esq.; Rt. Hon. Sir Frederick Pollock, M.A.; George Rennie, Esq.; Edward Solly, Esq.; Lord Wrottesley.

The total receipts during the past year, exclusive of the balance, amounted to £3176 19*s.* 6*d.*, and the expenditure during the same period, exclusive of the sum of £600 invested in the funds, was £3000 5*s.* 7*d.* Under the head of Donation Fund, the Society has paid £250 during the past year, as follows: To Dr. Hofmann, for Chemical Investigations, £100; to Mr. Miller, for Meteorological Observations, £50; to Mr. Newport, for Physiological Investigations, £50; to Dr. Frankland, for Chemical Investigations, £50.

Veterinary Masses. Dr. Kreuzer, Professor at the Veterinary College, at Munich, has been peremptorily removed from his office, in consequence of his having in his lectures adverted to the superstitious practice, of which some recent instances had occurred, of the people calling in the Franciscans to read masses for their cattle during an epidemic.

Exhibition of 1851. Mr. Erasmus Wilson has been appointed Chairman of the sectional committee for the exhibition of surgical instruments at the forthcoming display of the industry of all nations.

Bengal Medical College. This institution, which has now been established fourteen years, continues to flourish vigorously. It was here that the superstitious prejudices of the Hindoos against the handling of dead bodies, were first overcome by the example of a native student; and we find that, during the last session, sixty-three students were in attendance on anatomy and physiology, and during that time had dissected two hundred and twenty bodies, and performed operations on ninety-one. In connexion with the College, a hospital has just been established for the relief of the sick poor of all classes and creeds in the city of Calcutta, and particularly for those affected with epidemic diseases; the money for building which, has been partly raised by public subscription, and the remainder by private native liberality. Dr. Goodeve, the Professor of Midwifery, has most generously placed in the hands of the Council of Education, the sum of 3600 rupees, in government securities, for the perpetual maintenance of a midwifery scholarship of 16 rupees a month, for the best student of the midwifery class; to be awarded only to matriculated students of the medical college, who are *bonâ fide* natives of India, of Hindoo or of Mahommedan parentage, as long as such young men can be found in any way qualified to perform the duties of the office.

University College. We regret to find that Professor Graham is in very bad health. Professor Sharpey is not to be transported to Edinburgh, as was lately rumoured.

Bloomsbury Dispensary. The following gentlemen are candidates for the appointment of Physician to this Dispensary (to which is attached, as also to the surgency, a salary of £100 a-year), Dr. Goodfellow, Dr. George Johnson, Dr. Steggall, and Dr. Pidduck.

Marylebone Dispensary. The Governors of this Institution, we are happy to learn, propose to resume the payment of their medical officers. That the medical officers of all charities are not remunerated, is to be regretted.

Hagyard *v.* Coates. On the 19th inst., in the County Court, Bridlington, Mr. Hagyard, surgeon of Hunmanby, brought an action against J. Coates for 15*s.*, for attendance in midwifery upon his wife. The defendant pleaded his inability to pay this amount. His Honour, Judge Raines, inquired the usual amount paid by the Board of Guardians in cases of midwifery; and was informed that 10*s.* 6*d.* constituted the sum paid for confinements, without regard to distance, which induced His Honour to give a verdict of 10*s.* 6*d.* for the plaintiff. Although the plaintiff, a most respectable man, swore that Coates was able to pay the amount at once, the Judge directed him to pay 2*s.* a month. Thus the Profession will perceive that County Court law professes to regulate the charges of medical men by the "*penny wise*" folly of the Board of Guardians; and crowns the insult by the miserable and unnecessarily tedious manner in which the payments are made. It is high time that some Legislative measure was enacted to restrain the oppression which is daily victimising the honest practitioner from east, west, north, and south. [*Medical Times, December* 28, 1850.]

Hunterian Oration for 1851. Mr. R. A. Stafford has been appointed by the Council of the Royal College of Surgeons to deliver the annual oration in memory of John Hunter, on the 14th of February, 1851.

Parisian Medical Society. The following gentlemen have been elected office-bearers, for the next twelve months: Dr. J. W. Begbie, *President;* Dr. George Fleming, *Vice-President;* Dr. W. R. Sanders, *Secretary;* and R. Sarrell, Esq., *Treasurer.*

Self-Supporting Dispensaries. The tide has strongly set in against the establishment of these institutions in London. As the Society have not yet published their laws, nor a list of their office-bearers, we feel quite unable to speak for or against the present movement.

St. Mary's Hospital. The 28th Dec. was the last day on which candidates for the medical and surgical appointments at this institution were allowed to send in their applications. The officers to be appointed are, three physicians, three assistant-physicians, three surgeons, three assistant-surgeons, one physician-accoucheur, one surgeon-accoucheur, one aural surgeon, and one ophthalmic surgeon. The candidates are very numerous. For the office of secretary (lately filled), it is said that there were *three hundred* candidates! The emolument is £200 per annum.

Cholera in Jamaica. It is impossible to describe the desolation and dismay which the Cholera is causing in Jamaica. Not only are the medical practitioners in the island numerically inadequate for the fearful emergency, but we see by the local newspapers that opium and other necessary medicines, are not procurable in sufficient quantity.

APPOINTMENTS.

Bushnan, Dr. J. S., appointed Senior Physician to the Metropolitan Free Hospital, Devonshire Square.

Eddison, Booth, Esq., elected Surgeon to the Nottingham General Hospital, in the room of G. M. White, Esq., resigned.

Edwards, Vertue, Esq., appointed Resident Medical Officer to the Hospital for Consumption at Brompton.

Rowland, Dr., elected Assistant-Physician to the Charing Cross Hospital.

Simpson, Professor J. Y., elected President of the Royal College of Physicians, Edinburgh.

Williams, W. J., Esq., elected Resident and Visiting Surgeon to the Tower Hamlets Dispensary.

OBITUARY.

Allender, Dr. G., Assistant-Surgeon R.A., at Poona, in August last.

Andrews, Richard, Esq., Surgeon, late of Great Stanmore, Middlesex, at Uxbridge, aged 75, on 11th December.

Asbury, D., Esq., Surgeon, at Enfield, Middlesex, from the effects of a wound received while making a *post-mortem* examination, aged 23, on 25th October.

Brodie, Patrick, Esq., late Assistant-Surgeon, 13th Light Infantry, at Ordnance Place, Chatham, on 1st of December.

Calvert, Robert, M.D., Deputy-Inspector of Military Hospitals, at Camden New Town, on 12th December.

Courtenay, John Garnett, Esq., Staff-Surgeon, late Principal Medical Officer of New Zealand, on board the barque *Clara*, off the island of St. George, Azores, on 28th November.

Cunningham, Dr. Thomas, at Glasgow, of congestive apoplexy, on 10th October.

Davis, J. G., Esq., Surgeon, at Birmingham, from the effects of a wound received in making a *post-mortem* examination, aged 42, on 5th November.

Dorrington, Thomas, Esq., Surgeon to the Manchester and Salford Lying-in Hospital, at Manchester, aged 33, on 5th November.

Goss, John, Esq., Surgeon, at 36, Paternoster Row, aged 51, on 6th December.

Gordon, Dr. William, late of Montego Bay, Jamaica, at Perth, aged 42, on 24th October.

Guthrie, Dr. James, Assistant Colonial Surgeon, and formerly Assistant-Physician to the Royal Edinburgh Asylum, on board the barque *Atlantic*, at Trinidad, aged 34, on 26th September.

Heath, Dr. G. T., at Hoxton Old Town, aged 67, on 10th December.

Hume, Thomas, M.D., at Rose Bank, Hanwell, Middlesex, aged 81, on 21st October.

Jackson, Dr. Francis, at Dorchester, aged 43, on 14th November.

Ledingham, G., Esq., Surgeon, 83rd Regiment, at Poona, on 14th September.

Logan, Dr. D., Surgeon to the Nepaul Residency, in Bengal, lately.

Maitland, Dr. M., at St. Omer's, aged 81, on 26th November.

M'Lagan, Dr. John, at Demerara, on 11th October.
O'Connor, Dr. P., of fever, in Egypt, lately.
Philip, John, Esq., Assistant-Surgeon R.N., at Edinburgh on 13th December.
Ranson, John, Esq., Surgeon, at Ipswich, aged 33, on 27th October.
Royer-Collard, M., Professor of Hygiène at the Faculty of Medicine, Paris, aged 47, lately.
Saunders, James, Esq., Surgeon, at Foulsham, Norfolk, aged 67, on 12th Nov.
Simes, J. G., Esq., Surgeon, of Hungerford, aged 33, on 12th November.
Tanner, R. E., Esq., Surgeon, at South Molton, aged 56, on 2nd November.
Taylor, Dr. John, late Surgeon R.A., at 72, Upper Berkeley Street, Portman Square, aged 79, on 22nd November.
Walker, Dr. A., Surgeon in the Nizam's army, at Bolarum, of a fall from his horse, on 5th September.
Wheeler, James, Esq., Surgeon, at Wokingham, Berks, aged 84, on 15th Nov.
Whymper, Sir William, M.D., formerly Surgeon R.A., at Dover, aged 65, on 28th November.
Wilkinson, Dr. Charles H., in Pulteney Street, Bath, aged 87, on 15th October.
Wylie, Sir James, M.D., many years Physician to his Imperial Highness the Grand Duke Michael of Russia, at St. Petersburgh, aged 55, on 9th October (O.S.)
Yarnold, Dr. G., at Crookwell, Goulbourne, aged 38, on 20th May.

BOOKS RECEIVED.

Brodhurst on the Crystalline Lens and Cataract. London: 1850. Burnett on the Philosophy of Spirits. London: 1850. Druitt's Surgeon's Vade-Mecum. Fifth Edition. London: 1850. Higginbottom on the Development of the Triton and Frog. London: 1850. Hoskins and Mansell on Cholera and Small-pox. Guernsey: 1850. Prospectus of Epidemiological Society. London: 1850. Sanders on the Spleen. Edinburgh: 1850. Skey's Operative Surgery. London: 1850.

POSTSCRIPT TO MR. W. R. WILDE'S ARTICLE ON THE OPHTHALMIA OF THE TIPPERARY AND ATHLONE UNIONS.

The following was received too late for insertion in the paper on the above subject, given at page 17 of the present Number.

"I have just received a communication from Dr. Reardon, in which he informs me that the School in Bank Place—a very much more healthly locality than the Corn-store in Meeting-house Lane—has been converted into an Ophthalmic Hospital. 'There are there', he says, in his letter of December 15, 'very good airy wards, two large yards, and a garden to walk and play in. There is also an abundant supply of fresh water, and the dwelling-house is very comfortable. We have now 250 cases in town, most in the convalescent state, and 130 in the country. We have now very few bad cases, and the disease has, with rare exceptions, lost that intensity and destructive character, which in some constitutions, paupers in particular, does not yield to any treatment. I saw such vast benefit from removing the patients to the country residence at Castle Lloyd, as you recommended, and such a marked alteration in the nature and character of this disease, and the health and appearance of the patients generally, but especially the young female children, that I am fully persuaded it alone would remove the epidemic, and that little treatment, besides strict attention to ventilation, cleanliness, warmth, and diet, would be required. Knowing this, we have lately succeeded in getting another Auxiliary Workhouse, four miles from town, to which place we have just sent 130 convalescents. The bad cases, and those requiring constant treatment, are kept at Bank Place. Many of the cases supposed to be blind four months ago are now brightening up.'"

TO CORRESPONDENTS.

The Communications of Dr. C. J. B. Williams, Dr. George Johnson, Mr. W. R. Wilde, Mr. Hird, Dr. Cormack, Mr. White Cooper, etc., in our next and following Numbers.

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ORIGINAL COMMUNICATIONS.

ON THE PHYSICAL EXAMINATION OF THE ABDOMEN, IN HEALTH AND DISEASE.

By CHARLES J. B. WILLIAMS, M.D., F.R.S.

(Continued from page 6 of last Number.)

EXAMINATION OF THE ABDOMEN BY PALPATION.

The method of Palpation of the Abdomen is a subject of importance, and demands a few directions and cautions. The parts of the hands best qualified to feel are the palmar surfaces of the fingers, the pulpy portions of the last phalanx being endowed with the finest touch. But they should be flatly applied, at least at first; as nothing is more likely to start the abdominal muscles into rigid contraction than to poke them abruptly with the ends of the fingers. For the same reason, the observer should not be too much above the patient, and if the bed on which the patient is placed is low, the practitioner should sit or kneel beside it, in order to bring his arms and hands more on a level with the abdomen. It is equally obvious that the observer's hands should be comfortably warm; not only for the sake of the patient, but also because the touch is more sensitive in that condition. The posture of the patient generally best suited for examination is the supine, on a mattress or sofa, with the limbs lying straight, but without the least straining or muscular effort. It is often recommended to draw up the knees in order to relax the abdominal muscles; but this action is very apt to produce just the contrary effect, and further interferes with the free accessibility of the lower parts of the abdomen to the observer's hands. It is the great object, that whilst the body and limbs are so equally and completely supported as to be in a state of perfect relaxation, the whole abdomen shall freely admit of the application of the hands to every part, and in every direction. This further suggests, that in all cases requiring nicety in manipulation, the abdomen should be laid bare, the clothing sufficiently put out of the way, and that either the bed be narrow enough or the patient be moved to each

edge of it, so that the observer may be able, if necessary, to examine from both sides; this is especially requisite in the deep palpation to be described further on.

The kind of tact by which the different properties of *shape*, *softness* and *hardness*, *elasticity*, *weight*, etc., are distinguished, is so instinctive as scarcely to be capable of description; but it may somewhat guide a novice to say, that we trace the *shape* by applying the flat fingers and gently rubbing them over and between the prominences and depressions. We test the *softness* or *hardness* by pressing gently with the pulpy surfaces of the last phalanx on the successive parts over which the hands are passed; that which readily yields being soft, whilst the hard resists the pressure; the *elastic* opposes to it a spring, which, although yielding to strong pressure, sensibly pushes away the fingers as their application is relaxed. *Weight* is felt by lifting upwards a part, and observing what force is required to do this, and with what force it presses down again on the fingers as they are slightly withdrawn: trying the weight of part of the abdomen can be practised only in the lumbar and lateral regions in the supine posture; the anterior regions may be in a measure lifted and weighed by the hands, when the patient lies on his face, or sits leaning the body forwards; and this kind of examination is often of much importance in the diagnosis of ascites and solid visceral enlargements.

In the healthy state, the abdomen is in every region soft and moderately elastic; it feels smooth and uniform to the hand rubbed gently over it; when pressed superficially or deeply, its resistance is elastic and increasing with the pressure; when percussed on one side, no shock or fluctuation is felt on the opposite side; the different parts, when lifted, feel pretty equal in point of weight. This uniformity of soft elasticity represents the intestinal canal in its normal state, containing a moderate amount of gaseous, liquid, and semi-solid matter pretty uniformly distributed through it. As observed by inspection, so slight prominences may often be *felt*, corresponding with the stomach, the cæcum, and occasionally below the umbilicus; but these also feel soft and elastic as other parts, and do not detract from the generally equable character of the healthy abdomen.

Variations from this normal state of the abdomen may arise from alterations in the walls; and it will be well to advert to these before describing those caused by disease of the interior. Excess of fat gives a fulness which will feel firm and elastic, or soft and flabby, according to whether it is on the increase or on the decrease; but it may be known to be fat by its peculiar lumpy feel on the surface, so that it may be pinched up by the fingers and thumb; and in this way the thickness of the layer may be estimated. In the case of very fat paunches, there are masses of fat also in the omentum and mesentery; these form the large rounded prominence of the *pot-belly*, which renders the palpation of the abdominal viscera very difficult. In order to reach them in such a case, it is necessary to press firmly into the fat, and then to feel by moving the hand in a circular, or backward and forward direction; this may best be accomplished in the iliac and hypogastric regions, where the fat in the walls is not so thick as in the central regions of the abdomen. Where a corpulent person has lost much flesh, which is often the case in chronic disease, the loose

flabbiness of the pendulous abdomen may embarrass the practitioner; and the more so, as the fat which is left often has a granular or knotty feel, which might be mistaken for formations within the abdomen. These inequalities are to be distinguished by their being superficial, and capable of being grasped between the fingers and thumb; and the examination of the deep parts is to be effected by the hands steadily pressed inwards, pushing aside these inequalities, and rolling about or handling in divers ways the viscera underneath. Œdematous walls are to be treated in a similar manner, and are distinguished by their inelastic boggy feel, and pitting on pressure.

Permanent tension of the abdominal muscles is a common impediment to the palpation of the abdomen; it causes a feeling of superficial hardness, especially in the direction of the recti muscles.[1] If there be any doubt as to its seat, it may be dissipated by keeping the flat hand steadily and firmly applied with increasing pressure for a few minutes, whilst the patient's attention is taken off by conversation on another topic. The muscles will then be found either to relax altogether, or so much to vary their degree of tension as plainly to reveal the cause of the hardness. This test is equally successful, whether the muscular tension be caused by nervous irritability, or by actual pain or tenderness; for even in the latter case, flat pressure, gently and very gradually applied, may be managed so as not to increase the pain.

Extreme flaccidity of the walls of the abdomen might be supposed to remove all sources of fallacy in the manual examination of the abdomen; and it is, in fact, an easy matter to feel the place, shape, and consistence of almost every abdominal viscus: yet under such circumstances it is not very uncommon to find the pulsation of the abdominal aorta mistaken for an aneurism, and I have known the anterior convexity of the lumbar spine mistaken for a tumour. These errors arise from the observers not being aware how deep in the abdomen the hand reaches, and would be readily corrected by placing the other hand behind the back, and by thus feeling how small is the distance between the two hands.

Palpable signs of Disease in the Abdomen. *Fæculent accumulations* occur chiefly in the large intestines, and the lower part of the ileum; but the remaining portions of the small intestines are commonly more or less distended with gas. Hence the abdomen is generally enlarged; and the fulness feels more elastic around the umbilicus; and more resisting, yet not absolutely hard, in the iliac and hypochondriac regions. The course of the large intestine may often be traced; the greatest prominences being usually caused by the cœcum and transverse arch; and, if the abdominal walls are not tense, it is quite possible, by the pressure of the fingers, to distinguish the fæculent masses by, their substantial but inelastic feel, from the tympanitic contents of other parts of the intestine. If the accumulation be considerable, there is a very appreciable difference in the weight of different parts of the abdomen, as tested in the mode before described. If there be an excessive accumulation of air in the intestines, this dis-

[1] The tension of the rectus on the right side is often greater than that on the left, and I have frequently known it to be mistaken for enlargement of the liver. It does, in fact, sometimes arise from tenderness of the liver, which induces instinctively a firmer contraction of the muscles over it, to avert the pain of pressure.

tends them so much that the fæculent masses cannot be felt, and the whole abdomen has a tight elastic feel of rounded shape, but commonly showing more prominence in some parts than in others.

In *colic*, and constipation with severe *colicky pains*, there may in most instances be felt at parts, depressions, corresponding with contracted portions of intestines, which are hard and knotty, in comparison with the tympanitic elasticity of other parts. The abdominal muscles are often spasmodically contracted over these painful parts; but they become eased and relaxed under the steadily increased pressure of the flat hand. In these cases the weight of parts of the abdomen, as tested by lifting them when the patient is in the prone or leaning forward posture, is less than usual; the contents being proportionally lighter, and prevented from ponderating by the tight contraction with which they are bound.

The *tympanitis* of low fever and sinking states, of paraplegia from destruction of the lower portions of the spinal cord, or serious injury to its reflex function, is distinguished by the more uniform and less tense elasticity of the abdominal enlargement. The deficient tone of the intestines and abdominal muscles in these cases causes a larger and easier distension; and although the quantity of air pent up may be much greater, the tightness and resistance is less than in colic.

The presence of *liquid in the peritoneal sac* is capable of altering, in various ways, the palpable qualities of the abdomen. The size and shape may be felt to be changed in the same manner already described as obvious on inspection:—that is, the size is more or less enlarged, with bulging projections in the most dependent parts: the shape of the parts occupied with fluid is smoother, and more uniformly rounded than usual: and in extensive accumulations the surface may feel polished. But the resistance as felt by pressure is also distinctive: it is peculiarly soft, inelastic, and heavy. These qualities are most obvious where the abdominal walls are thin and flaccid; and under these conditions, there is no difficulty in detecting by the feel only, even moderate quantities of fluid in the abdomen. Ponderating to the most dependent parts, the fluid is to be felt in the flanks in the supine posture; at or near the umbilicus in the prone posture; in the iliac region when the patient lies on a side; and in the hypogastric region, when the patient sits, leaning forward. The soft and mobile yet weighty feel of these dependent parts, is to be compared with the more elastic and lighter resistance of other regions occupied by air-filled intestines; and by making the patient change his posture, allowing two or three minutes to give time for the subsidence of the liquid, we may have the further evidence that it is free in the peritoneal sac, if we feel it still showing itself in the most dependent parts. It does not often happen that there is enough liquid in the intestines to give anything like the same superficially soft and heavy sensation under the fingers; and when there is, it may be distinguished by its not thus gravitating from one region to another, as well as by its giving less sensation of superficial softness, and more of a gurgling or elastic feel, from the presence of air.

In proportion as the quantity of fluid in the peritoneum becomes greater, the distension of the walls also increases, and hereby the softness of the abdomen is diminished, whilst the weight is more pal-

pable. The liquid still gravitates in greatest volume to the lowest parts; but it also spreads more or less upwards in a layer between the viscera and walls of the abdomen; and gives a smoothness of surface, and uniformity of the peculiar weighty fluctuating resistance which characterizes its presence. So long as the distension is moderate, the air-filled intestines will usually float on the surface sufficiently to be in contact with the uppermost portion of the abdomen; and this will of course vary with the posture of the patient; that part can generally be distinguished by a delicate touch, which may be verified by the more obvious difference of percussion.

But there is a palpable sign of the presence of liquid, often manifest with a moderate degree of distension, more characteristic than any sign, not excepting those of fluctuation and percussion: I mean the striking of the fingers against the liver, or any other resisting body beyond the surface of liquid. It is plain that this sign will be most evident where there is considerable enlargement of the liver, spleen, or some other solid body; and as the liquid and solid become both more distinguishable on account of the contrast in the resistance which they respectively offer to the fingers, the sign serves to detect the presence of both. Thus a slight enlargement of the liver, reaching two or three inches below the margin of the ribs, may not offer resistance enough to be distinctly palpable by itself; but if there be a layer of serum interposed, and this be abruptly displaced by the fingers, they will strike the solid body with a distinct shock which will unequivocally prove the presence of both fluid and solid. It so happens that in a large proportion of the cases in which there is fluid effused in the peritoneal sac, there is also more or less enlargement of the liver, or some other large viscus; hence this sign becomes more generally useful. By its means I have been enabled to detect the presence of even thin deposits on the omentum and intestines, and of deeper seated mesenteric and ovarian tumours. Solid fæculent masses in the intestines may give a similar resistance to the fingers under a layer of fluid; and it is important that this source of error should be avoided, by having the bowels well cleared by aperients before the examination.

In manipulating for this sign of liquid and solid resistance, the fingers should be gently pressed more or less into the walls, and then a deeper impulse is to be abruptly made with their ends, so as to strike at any body which may offer resistance, and which then meets the stroke. Over an enlarged liver or spleen, this sign is best felt in the sitting or erect posture; or if the quantity of fluid be considerable, in the prone or leaning forward position. Indurations of the omentum and intestines are better detected when the patient lies on the back. In considerable enlargements of the spleen or left kidney, I have found this sign in the left lumbar region; but in other cases, the front of the abdomen is its usual seat.

On two occasions, through a modification of this sign, I have diagnosticated the presence of something adhesive on the striking surfaces. One was a case of ovarian tumour with ascites; the other, chronic peritonitis with enlarged liver. In both, the fingers readily felt the displacing fluid and the striking against the solid underneath; but on withdrawing the pressure, the surfaces in contact could distinctly be

felt to adhere for an instant before following the fingers, being retained by something adhesive. This sticking sensation was plainly felt by several students, to whom I pointed it out at the time, ascribing it to a coating of adhesive lymph. The post-mortem examinations did not occur till long after, but there was in both cases a deposit of false membrane on the surfaces which justified this inference. Probably this sign may prove useful in aiding to detect the presence of the low forms of peritonitis which frequently accompany abdominal tumours.

Fluctuation has long been recognised as a characteristic sign of the presence of fluid in the abdomen. It is commonly felt on applying the left hand on one side of the abdomen, and striking abruptly on the opposite side with the right hand, so as to direct the impulse towards the other hand. A wave is moved by the impulse, and rapidly passing to the opposite side, gives to the left hand the soft shock of fluid in motion. This wave-stroke is transmitted from one side to the other only when there is a continuous layer of fluid. If a fold of intestine rises to the surface in the centre of the abdomen, it intercepts the wave. Hence it often happens, where the quantity of liquid is moderate, that the fluctuation is felt at the lower part of the abdomen in the sitting or standing posture, and not when the patient lies on his back. The distinctness and character of the fluctuation vary according to circumstances that can be pretty exactly defined. The most remarkable degree is that produced when the abdomen contains much fluid, whilst the walls are thin and their tension is increased by a good deal of air in the intestines beneath the fluid. This adds to the elasticity of the walls; and wherever struck, they instantaneously transmit the shock with a kind of spring to every part of the surface; and so faithfully, that if a quick tattoo be played with the fingers on any part of the abdomen, each stroke can be felt in every other part with the greatest nicety. This highly vibratory fluctuation may therefore be considered a sign of flatus in the intestines, together with liquid in the peritoneum. Nor is this indication unimportant in its practical relations; for it leads to the use of mercurial purgatives and carminatives; which, by dispersing the wind, not only relieve the tension of the abdomen, but also bring the organs into a state more favourable for the absorption of the fluid.

When the distension of the abdomen depends on an excessive quantity of liquid alone, the fluctuation is still very distinct, but different in character from the last variety. It is less vibratory and spring-like, strikes the feeling hand with a deader, heavier shock, and requires a stronger stroke from the other hand to set it in motion. This kind of fluctuation, together with the peculiarly weighty feel of the abdomen in every part when lifted with the hand, and the equally dull sound on percussion, is a conclusive proof of the presence of a vast quantity of fluid, such as can seldom be removed without the operation of tapping. In fact, the same weight and pressure which we feel through the walls of the abdomen, is also oppressing and obstructing the organs of circulation, absorption, and secretion, to such a degree as to impede their functions, and to render them little amenable to purgatives and diuretics, which ordinarily excite their action. Hence, with such a state of abdomen, we find the urine and fæces

continue very scanty and vitiated, in spite of all the remedies we employ.

A moderate amount of liquid in the peritoneum requires more care to develope its fluctuation. It is most distinctly felt in the iliac regions when the patient is in the sitting or standing posture, which not only accumulates the fluid in greater quantity in these parts, but also thereby gives the requisite tension to the walls. If the liquid is in still smaller quantity, it may be insufficient to reach from one side of the abdomen to the other; and then it must be tried for in a more limited space, such as in hypogastric or in the one iliac region in the sitting posture. A delicate method of detecting small quantities of fluid by fluctuation, is by keeping the patient for some minutes lying on one side, then after he has turned nearly but not quite on his back, feeling for the fluctuation with the fingers lightly applied to the iliac region of the undermost side, whilst the other hand gently taps the flank or the hypogastric region; or the position of the feeling and striking hands may be reversed. By this expedient the fluid accumulates in contact with the walls where they are thin, and renders evident the gentlest fluctuation.

In feeling for such delicate and superficial fluctuation, it is important that the fingers should be very lightly applied; not pressed into the walls: otherwise the most sensitive parts of the fingers will be out of the reach of the wave. The soft and weighty feel of the liquid, as before described, may be taken in confirmation of the sign of fluctuation. The sensation of undulation itself, in fact, comprises more or less of the same impression of something heavy, soft, and in motion. It is important not to mistake for fluctuation an undulatory movement excited by percussion in the soft fat of the walls. This may be distinguished by its more uniform diffusion over the surface of the abdomen; by its not occurring more in dependent parts than in others; by its less liquid and weighty impulse against the fingers; and by its occurring chiefly in fat subjects, in whom the flabby adipose texture can be pinched up between the finger and thumb in such quantity as to prove that the walls are too thick to transmit any very superficial feeling of fluctuation from liquid in the abdomen. In fact, these cases of flabby fat abdomen are those in which small quantities of liquid are less readily detected by fluctuation, than by the comparatively greater weight and duller stroke-sound of the most dependent parts.

The discovery of a small quantity of liquid is of great importance in some cases; as for example, in distinguishing peritonitis from colic or neuralgic abdominal pain, and from tympanitis with which it is sometimes combined: and in detecting the first commencement of ascites, when remedies are more likely to be effectual than in the advanced stages. We are accustomed to watch for the signs of fluid effusion as indications of analogous conditions in the pleura; and by careful attention to the tests of palpation and percussion, these signs are not less available in the peritoneal cavity. It is true that we have not the striking contrast of the hollow-sounding lung, and the variations of voice and breath-sounds, to aid in their detection; but, on the other hand, we have the combined tests of percussion and palpation, and above all, we have in changes of posture of the patient the means of

concentrating the liquid in a dependent part, and of transferring it to another, in a degree unattainable with pleural effusion.

An obscure fluctuation may sometimes be elicited in the liquid contained in portions of intestine, in the urinary bladder, and even in the gall-bladder, and in cysts connected with the ovarium, the liver, the kidney, and other viscera; and if the quantity of fluid be considerable, it will manifest somewhat of its property of weight and soft resistance. But liquid thus contained may be distinguished from that free in the peritoneum, by its more obscure and less superficial fluctuation, and especially in its circumscribed position, which may not be the most dependent, and which is not materially changed with the position of the patient. It is quite possible to have combined, and to distinguish, the two kinds of fluctuation, the peritoneal, superficial, or gravitative, and the visceral, deep-seated, or circumscribed. The detection of the superficial fluid is even easier than usual, for the sac or cyst underneath raises the liquid, and makes it to spread more or less over its surface; which renders the fluctuation more obvious, and affords the additional criterion of the striking by displacement of the superficial liquid, as before described. The deep fluctuation is to be felt by first displacing the surface liquid by pressure, and with the hands thus deeply applied, succussion is attempted, and the contents of the cyst further felt. Change to the prone or leaning forward posture will commonly help in this investigation; as the cyst is often heavier, and, displacing the superficial fluid, comes in contact with the walls sufficiently to be manipulated. When the peritoneal fluid is scanty, the sac is more widely in contact with the walls, and may not be separable by any change of posture. In this case it may be of importance, in reference to an operation, to determine whether the sac adheres to the peritoneal walls; and in one such instance, a case of ovarian cyst, I was enabled to decide this point by the following expedient. The funnel end of a stethoscope being applied to the abdomen where the tumour was in contact with the walls, suction was used at the other end so as to make the walls adhere (by atmospheric pressure) to the instrument; it then became a means of separating the walls from the sac, the peritoneal fluid occupying the space; the presence of which fluid was determined by palpation around the part adhering to the stethoscope, and thus the non-existence of adhesions was proved. This patient was subsequently tapped; and when the fluid again accumulated, the surfaces could no longer be separated, adhesion having taken place around the puncture.

(To be continued.)

ON THE WEIGHT OF THE BRAIN AT DIFFERENT PERIODS OF LIFE, ETC.

BY THOMAS B. PEACOCK, M.D., Fellow of the Royal College of Physicians, and Assistant-Physician to St. Thomas's Hospital.

In the year 1846, I communicated to the *Edinburgh Monthly Journal of Medical Science* a series of observations of the Weight of the Brain and other organs of the body, together with various tables, compiled from the whole of the observations collected by the late Professor John Reid[1] and myself, while holding the office of Pathologist to the Royal Infirmary of Edinburgh. Since this time I have made the following observations, which, though comparatively few in number, yet being complete as to the weights of the brain and its several parts, and corresponding in every respect with the two previous series of observations collected by Professor Reid and myself, may form an useful addition to them. The present series contains also several weights of the Brain in young persons, in which the former were especially deficient. The weight employed, I need scarcely add, is avoirdupois.

TABLE I. WEIGHT OF THE BRAIN IN MALES.

The D in the column "Heart" indicates that the organ was diseased.

No.	Age	Weight of the Whole body.	Encephalon.	Cerebrum.	Cerebellum.	P. Varol. & Med. Oblong.	Heart.	Cause of Death, etc.
		lbs. oz.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	
1	2	24 0	43 7	38 6	4 8	0 9	2 10	Burn; death in 21 days.
2	2	..	37 0	..	..	..	..	Malformation of the heart.
3	2½	31 8	47 0	42 0	4 4	0 12	2 12	Burn; 6 hours. Liver, 19oz.; spleen, 2oz. 8dr.; kidneys, 3oz. 8dr.
4	3	25 4	38 1	33 3	4 2	0 12	..	Burn; 15 days.
5	4	..	50 10	45 8	4 8	0 10	4 4	Burn; 12 hours.
6	5	21 0	45 12	40 0	5 0	0 12	3 0	Cholera; 6 days. Spinal cord, 11dr. 14grs.; pons Varolii, 7dr. 15grs. Total, 19dr. 2gr.
7	10	45 0	47 12	42 0	5 0	0 12	4 4	Cholera. Spleen, 2oz. 12dr.; kidneys, 4oz. 4dr.
8	11	..	46 0	40 0	5 0	1 0	5 8	Fever. Spleen, 9oz.
9	14	..	48 12	43 0	5 0	0 12	6 2	Fever.
10	15	88 0	50 8	44 0	5 8	1 0	8 0	Instant death from injury.
11	15	..	41 10	36 0	5 0	0 10	6 0	Phthisis.
12	15	..	49 4	43 8	4 12	1 0	10 0	Malformation of the heart. Liver, 45oz.; spleen, 6½oz.; kidneys, 8oz.
13	16	..	43 8	38 0	5 8		..	Fever.
14	20	..	37 0	32 4	4 0	0 12	12 0	Malformation of the heart.
15	24	..	47 8	41 8	5 4	0 12	9 0	Fever.
16	25	..	48 8	42 0	5 8	1 0	..	Fever.
17	21	121 0	51 0	45 0	5 0	1 0	..	Cholera.
18	29	..	52 0	46 0	5 0	1 0	14 0D	Cholera.
19	30	..	59 8	53 0	5 8	1 0	..	Fever.
20	33	..	48 8	42 0	5 8	1 0	12 8	Pleuropneumonia; 3 weeks.
21	32	..	48 0	..	..	..	16 0	Diseased heart. Liver, 80oz.; spleen, 13oz.; kidneys, 14oz.
22	37	99 0	49 0	43 0	5 0	1 0	9 0	Fever and erysipelas.

[1] Edinburgh Monthly Journal of Medical Science. April 1843.

No.	Age.	Weight of the Whole body.	Weight of the Encephalon.	Weight of the Cerebrum.	Weight of the Cerebellum.	Weight of the P. Varol. & Med. Oblong.	Weight of the Heart.	Cause of Death, etc.
		lbs. oz.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	
23	42	..	46 8	41 0	4 10	0 14	..	Chronic diarrhœa.
24	45	..	52 12	45 8	6 4	1 0	10 0	Phthisis.
25	51	..	45 0	39 8	4 8	1 0	13 0D	Bronchitis.
26	50	..	56 4	50 0	5 8	0 12	14 0D	Erysipelas; 9 days.
27	60	..	51 0	45 0	5 0	1 0	..	Cholera.
28	65	..	47 6	41 4	5 6	0 12	12 8D	Intussusception.
29	72	..	42 4	37 0	4 8	0 12	14 0D	Morbus cordis et hepatis.
30	78	..	48 0	42 0	5 0	1 0	18 0D	Injury of the head.

TABLE II. WEIGHT OF THE BRAIN IN FEMALES.

No.	Age.	Weight of the Whole body.	Weight of the Encephalon.	Weight of the Cerebrum.	Weight of the Cerebellum.	Weight of the P. Varol. & Med. Oblong.	Weight of the Heart.	Cause of Death, etc.
		lbs.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	
1	7 days	7	14 1	12 13	1 0½	0 3¾	0 13	Liver, 6oz. 8dr.; spleen, 6dr.; kidneys, 1oz.; medulla spinalis, 2½dr.
2	1 year	15	31 8	27 0	4 0	0 8	2 0	Phthisis. Liver, 12½ oz.; spleen, 1oz.; kidneys, 2¾oz.
3	1¾	13½	31 0	27 0	3 8	0 8	1 8	Hydrocephalus.
4	3	22	39 10	34 8	4 8	0 10	1 12	Burn; 1 day.
5	3	22	34 10	30 8	3 11	0 7	1 10	Burn; 4 hours. Liver, 16½oz.
6	5	28	41 8	36 8	4 4	0 12	2 14	Cholera; 1 day.
7	6	..	51 0	45 8	4 12	0 12	2 12	Burn; 14 hours. Spleen, 1oz.8dr.; kidneys, 3oz.12d.
8	11	36	44 6	38 8	5 0	0 14	3 14	Cholera. Spleen, 2oz.; kidneys, 4oz.
9	13	46¾	37 8	32 8	4 4	0 12	6 2	Fever.
10	19	..	45 0	39 0	5 0	1 0	8 0	Cholera.
11	20	..	49 0	43 0	5 0	1 0	..	Fever.
12	19	..	46 12	41 0	5 0	0 12	7 12	Fever.
13	22	..	44 6	39 0	4 6	1 0	10 4	Fever.
14	30	..	46 0	40 0	5 0	1 0	10 0	Cholera.
15	36	104½	43 0	37 8	4 8	1 0	9 0	Delirium tremens.
16	76	..	44 6	38 6	5 0	1 0	10 12D	Strangulated hernia.

WEIGHT OF DISEASED BRAINS.

MALES.

11	38	56 4	50 0	5 4	1 0	4 0	Chorea; 6 weeks.
12	..	53 0	..	..	..	..	Convulsions.
33	..	54 0	..	..	..	11 0D	Apoplexy; 3 days.
62	..	39 12	35 0	4 4	0 8	16 0D	Soft. of brain, morbus renum

FEMALES.

24	..	42 8	37 0	5 8	..	..	Diseased brain and ear.
70	..	43 0	..	..	..	13 0D	Apoplexy.

The above observations are so few in number, that I have not thought it necessary to compile separate tables from them, more especially as it will be seen that they very closely correspond with the former much more numerous series. In the two following tables, however, I have presented the results obtained by calculating the whole of the data collected by Professor Reid, together with the present and former observations published by myself.

TABLE III. *Average Weight of the Brain at different periods of Life in Males.*

Ages.	Numbers weighed.	Average weight.
		oz. dr.
1 to 2 years	3	39 7
2 to 3 ..	4	44 1
3 to 5 ..	6	44 13·16
5 to 7 ..	4	45 4·25
7 to 10 ..	6	46 14·33
10 to 15 ..	13	47 15·2
15 to 20 ..	11	49 5
20 to 25 ..	21	50 13·9
25 to 50 ..	123	50 3·8
50 to 90 ..	53	48 9·4
	244	

TABLE IV. *Average Weight of the Brain at different periods of Life in Females.*

Ages.	Numbers weighed.	Average weight.
		oz. dr.
1 to 2 years	3	31 1·3
2 to 3 ..	9	37 5
3 to 5 ..	4	41 0·5
5 to 7 ..	5	41 4
7 to 10 ..	2	40 6
10 to 15 ..	3	40 10·6
15 to 20 ..	18	45 4·1
20 to 25 ..	15	46 1·8
25 to 50 ..	69	45 0·6
50 to 90 ..	23	43 0·3
	151	

The extreme range in the weight of the encephalon of the adult male is from 34 oz. to 62 oz. 12 dr., the number of brains weighed having been 197; and in the adult female the range is from 36 oz. 12 dr. to 54 oz., the number weighed having been 107.

1. The average weight of the encephalon of the adult, as calculated from the observations contained in Tables I and II, is, in males, 50oz.6dr.; and in females 44oz. 7½ dr. The previous observations[1] gave an average of 50 oz. 3 dr. for the weight of the encephalon of the adult male, and of 44 oz. 14 dr. for that of the female. A similarly close correspondence will be observed on comparing the respective average weights of the several portions of the brain, as deduced from the two series of observations.

2. The observations now published show, with little exception, an increase of Weight in the Brain up to the period of adult age, but they are too few to satisfactorily illustrate this point. The tables compiled by Professor Reid,[2] that drawn up by Dr. Boyd[3] from a very extended series of observations conducted at the St. Marylebone Infirmary, and the tables in my former communication, founded upon the united ob-

[1] Edinburgh Monthly Journal of Medical Science, vol. vii, pp. 101, 166. 1846.
[2] Edinburgh Monthly Journal, vol. iv. 1843.
[3] Wagner's Physiology, translated by Willis. 1844. Appendix, p. 700.

servations of Dr. Reid and myself, have so conclusively established the fact that the Brain does not attain its full development till from twenty to twenty-five years of age, that I should not have thought it necessary to insist upon it, had not Sir W. Hamilton[1] recently repeated, as fully established, the opinion which he formerly expressed,[2] that the Wenzels[3] were correct in stating that the brain attained maturity at or before the age of seven. To illustrate, therefore, the law of development of the brain, I have calculated the whole of the observations of Professor Reid and myself, and the results obtained are given in Tables III and IV.

From these tables it will be seen that the average Weight of the brain increases up to from twenty to twenty-five years age.[4] During middle life, or from twenty-five to fifty years of age, it retains about the same weight, and in after-life it declines considerably. It is true that some exceptions will be found to this rule among the separate observations, but though it occasionally happens that the brain of a young person may be found to equal or exceed in weight the average of adults of the same sex, such exceptions do not frequently occur, and can then only be ascribed to the organ having attained premature maturity, or, most generally, to the mode in which death has occurred. In cases where there is much obstruction to the circulation through the lungs during the last periods of life, the brain is found very much engorged, and though great care be taken to deprive it of the blood, it will still weigh heavier than if death had taken place under different circumstances. Thus it is that the brains of persons who have died shortly after the receipt of extensive burns, or in the collapsed stage of cholera, are found to be unusually heavy. Generally also persons who have died of acute diseases, have heavier brains than those who have long suffered from exhausting causes. To obtain, therefore, unexceptionable results, it would be necessary to calculate the average Weight of the Brain in persons who have died under precisely similar circumstances, and in observations so framed I am satisfied that the exceptions to the general rule would be very rare.

Sir W. Hamilton[5] states that he has "established, apart from the proof by averages, that the human encephalos does not increase after the age of seven at the highest. This has been done by measuring the head of the same young person from infancy to adolescence and maturity: for the slight increase in the size of the head after seven (or six) is exhausted by the development to be allowed to the bones, muscles, integuments and hair." It is, however, evident that this method of investigation can show only the period at which the brain attains its greatest bulk, and not that at which its development is completed; for every practical anatomist is familiar with the fact, that the density of the brain varies greatly at different periods of life. Calculations of the average Weight of the Brain afford the only means by which we can ascertain the period at which its full development is attained, and the changes which it undergoes during the progress of life.

[1] Edinburgh New Philosophical Journal, Jan. to April 1850, p. 330.

[2] Monro's Anatomy of the Brain. 1831.

[3] De penitiori structura cerebri Hominis et Brutorum, p. 267, fol. Tubing. 1812.

[4] It is probable, indeed, that there may be a slight increase beyond this period. In Dr. Boyd's table the weight, both in males and females, is greater at from 30 to 40 years, than at any other period of life.

[5] Edinburgh New Phil. Journ. January to April 1850.

ON SOME VARIETIES OF RENAL DISEASE, WITH ESPECIAL REFERENCE TO DIAGNOSIS AND PROGNOSIS.

By GEORGE JOHNSON, M.D., Fellow of the Royal College of Physicians, and Assistant-Physician to King's College Hospital.

None but those who have paid much attention to the Diseases of the Kidneys, and to the means of distinguishing one form of disease from another, can form an estimate of the true value of the information to be derived from a chemical and microscopical examination of the urine. It may safely be affirmed, that a microscopical examination of the urine is, in general, as necessary for the formation of a correct opinion in cases of renal disease, as a physical examination of the chest is for the exact diagnosis of diseases within that cavity. To determine the true nature of a disease in the kidney, and to form a probably correct judgment as to its course and termination, it is not sufficient merely to ascertain that albumen is present in the urine, that the specific gravity of the secretion is abnormal, and that moulds of the uriniferous tubes may be detected by the microscope. These signs may each and all be present in a given case; but a more precise examination of the circumstances is necessary for the formation of a correct diagnosis. The mere enumeration of these signs, such as is very commonly given in reporting cases of renal disease, will as little enable a practitioner to ascertain the true nature of disease in the kidney, as would a simple report of a patient having cough, with dyspnœa, expectoration, and a sound produced by the mixture of air and liquid in the air-tubes, suffice for the exact diagnosis of disease in the lung. In both instances, the signs must be exactly observed, and correctly reported; otherwise no sound opinion can be based upon them.

I have selected the following cases for publication, with a view to point out to my professional brethren some of the circumstances which require particular attention in the examination of cases of renal disease. It is well known that diseases of the kidney are amongst the most frequent of those which destroy life, and that some forms of renal disease are curable, while others are almost certainly fatal. In many of the most obvious circumstances, all the forms of renal disease are alike; and it is only by a careful attention to differences, which, however minute, may yet be readily and certainly appreciated, that we can hope to distinguish one disease from another, or to give a confident opinion as to the probable course and termination of a case.

The microscopical examination of the urine is much facilitated, by placing it in a conical glass, which will contain about three or four ounces. The fluid should be allowed to stand for a few hours before examination. I usually put it in the glasses at night, and examine it with the microscope on the following morning. This delay is not necessary if the sediment is abundant; but in many cases, when the sediment is small in quantity, it is quite essential that time should be allowed for its deposition to take place. A small quantity of the lower part of the liquid should then be removed with a pipette, and placed in a shallow cell for microscopical examination.

Case I. Acute Desquamative Nephritis—Urine very scanty, and highly Albuminous, with Epithelial Casts—Epileptic Convulsions and Coma—Recovery. I was called to see Ann Fers, æt. 54, as a dispensary patient, on the 6th Dec. 1849. I found her in a state of semi-stupor, and learned that she had been seized with a convulsive fit in the night. She had a wild, distracted look. The tongue was brown and dry. I subsequently learnt that, during the preceding six or seven months, she had lived very badly, in consequence of her husband being out of work. She had gradually become weak; and had restless nights, with frightful dreams, and spectral illusions. About a fortnight before I saw her, she had become much worse, with vomiting, intense head-ache, slight general dropsical swelling, pain in the back, and very scanty secretion of urine. She was ordered to have six leeches applied to the temples, and to take three grains of calomel every four hours.

In the course of the evening some urine was obtained. It had an abundant precipitate of lithic acid, and contained numerous *casts of tubes, with entire cells of renal epithelium*;[1] when boiled it became almost solid with albumen.

December 7th. In the morning of this day she was much the same. There had been no return of the convulsions; she had the same wild, and half-conscious expression of countenance; there was frequent vomiting. Eight ounces of blood were ordered to be taken, by cupping, from the lumbar region: two pills of colocynth and calomel to be taken immediately, and an effervescing draught every four hours.

December 8th. She was better; and said she was much relieved by the cupping; complete consciousness having returned soon after the operation. She had some sleep in the night; but was disturbed by horrid spectral dreams. Bowels freely opened; urine more abundant, and clearer; still some vomiting; tongue less dry, and cleaner. To take a mixture of sulphate and carbonate of magnesia three times a day.

From this time she steadily and progressively improved. The urine became more abundant; and all cerebral symptoms disappeared.

January 3, 1850. She began to take sulphate of iron with quinine three times a day. At this time the urine had a specific gravity of 1010; it was pale, abundant, contained a very few casts, entangling disintegrated granular particles of epithelium, the casts being of *small size:* albumen was still abundant.

February 4th. The urine had much the same characters. She was still pallid and feeble. The steel and quinine were continued.

March 7th. The quinine was omitted, and the dose of sulphate of iron was increased to two grains, with infusion of quassia, three times a day.

During the month of March she became much stronger, and in every way better. She gained flesh; and her face lost its pallor, and assumed a healthy hue. Towards the end of the month the urine was free from all trace of albumen, and contained no casts, nor renal epithelium. She remained under observation some weeks after this: her health continued good, and her recovery was complete.

Remarks. I reserve my remarks on the diagnosis and prognosis in this case, until I have referred to some other cases, with which it

[1] It is proposed to call casts of this kind "epithelial casts."

may be compared and contrasted. With reference to treatment, I have found, in other cases of acute desquamative inflammation of the kidney, that cupping in the lumbar region has afforded the same immediate relief to the cerebral symptoms, which was so striking in this case. There is no remedy in which, under the same alarming circumstances, I have an equal degree of confidence; and I feel assured that the abstraction of a small quantity of blood by cupping, from the region of the kidneys, is much more efficacious in removing cerebral symptoms, than any treatment directly applied to the head. In all cases of acute renal disease, whether occurring as a consequence of scarlatina, or from any other cause, when the urine is very scanty, and the patient complains of severe head-ache and drowsiness, there is much reason to fear that these symptoms may be followed by convulsions and coma; and unless the earlier symptoms are checked by a rigidly low diet, free purging, and the use of diaphoretics, no time should be lost in applying cupping glasses with the scarificatior over the kidneys. The congestion of the renal blood vessels is by this means lessened, the secretion is quickly increased, and the blood being thus purified, the cerebral symptoms are directly relieved. It must always be borne in mind, that an imperfect elimination of the urine will impoverish the blood more than the abstraction of a moderate quantity from the vessels, and that an attack of convulsions, if it do not end in fatal coma, may produce greater injury in the brain than all the powers of nature or of art can repair.

Case II. Occasional attacks of Gout—Chronic Bronchitis—Urine Albuminous, and containing Granular Casts—Death preceded by Convulsions—Chronic Desquamative Nephritis. Benjamin Hobday, æt. 47, a waiter, with sandy hair and pallid skin, was attended by me as a dispensary patient in Jan. 1847. Was in the habit of drinking freely, and had several times had gout. About three months before I first saw him, his wife had observed that his abdomen became tumid, and his face rather puffy; this soon subsided, and there was no subsequent appearance of dropsy.

This present illness began, six weeks before I saw him, with cough and mucous expectoration. There was large crepitation over both sides of the chest. He was losing flesh; he always appeared dull and heavy; and his tongue was dry and brown. He took an antimonial mixture without relief. The urine was scanty and high coloured; it contained a small quantity of albumen, and numerous *dark brown casts, apparently composed of disintegrated epithelium.*[2] No blood corpuscles were observed. The specific gravity of the urine was not noted.

January 25th. He had several attacks of convulsion, in the intervals of which he lay muttering and insensible. On the following day he died.

Post-mortem Examination. The brain and its membranes appeared quite healthy. The lungs contained scattered crude tubercles, and were much engorged and carnified. The only organs decidedly diseased were the kidneys; and they presented the characteristic ap-

[2] The term "granular casts" sufficiently expresses the character of these bodies.

pearances of chronic desquamative nephritis. The cortical substance was wasted, and its surface irregular and granular. Some tubes contained an excess of cells, differing little in appearance from the normal epithelium; while the greater number of the tubes contained the same granular material, which, when washed out, had evidently formed the casts which were observed in the urine during the life of the patient. Other tubes, again, were pale and transparent, being composed only of basement membrane; the epithelial cells, which probably had first become disintegrated, having been washed away by the current of liquid passing through the tubes.

Remarks. The preceding case is an example of the form of renal disease, which is very commonly observed in gouty subjects. The blood is contaminated by certain morbid matters, as a consequence of the gouty diathesis; the kidneys make an effort to eliminate these materials; and, in doing so, their secreting cells undergo a modification. They become opaque and granular, then completely disintegrated, and subsequently are washed away, leaving the tubes denuded. After the destruction of the secreting cells, the tubes waste, in consequence of the removal of the vital attractive influence of the cells upon the blood.[1] The cortical substance thus becomes irregularly contracted and granular.

There is one point of view in which it will be instructive to compare the case of Hobday with that of Fers. It might have happened to me to have seen Hobday for the first time, as I did Fers, soon after the first attack of convulsions. The question arises,—were there any distinctive signs in the two cases, which would have suggested, in the one case, a much more hopeful prognosis than in the other? This is clearly a question of great practical importance, and one, too, which happily admits of a decisive and satisfactory answer. In the case of Fers, the urine contained what I have called "epithelial casts", that is, fibrinous matter entangling *entire epithelial cells;* and these, with albumen, and very commonly blood, in the urine, indicate a recent acute disease in the kidney. In such a case, there is much reason to expect recovery, if we can succeed in warding off the urgent symptoms induced by the poisoned condition of the blood, consequent on the impaired excretory function of the kidney. In the case of Hobday, the appearances were very different. The casts in the urine were composed of *granular particles of disintegrated epithelium.* My observation has taught me to associate this form of cast with a chronic disease in the kidney. Where these casts have been observed in the urine during life, the kidneys will be found after death more or less wasted, sometimes extremely so, and the tubes will be in the condition described in the case of Hobday, some being entirely denuded, and others filled either with disintegrated epithelium, or with cells differing more or less from the normal epithelium. This chronic form of disease may have advanced to the extreme stage of atrophy before the occurrence of any urgent symptoms. Amongst the most common and most serious of its ultimate consequences, is an attack of convulsions,

[1] On this subject see the author's paper "On the Proximate Cause of Albuminous Urine and Dropsy", in volume xxxiii of the *Medico-Chirurgical Transactions;* also on the "Inflammatory Diseases of the Kidney", in volume xxx.

recurring more or less frequently. Now if, in a case in which convulsions have once occurred, we find the urine albuminous and containing the "granular casts" described above, we must be prepared for a recurrence of the attacks, and for the probability of a speedily fatal termination.

I must beg my readers to bear in mind, that the preceding remarks relate to cases in which convulsions or coma, or other serious mischief, have resulted from deficient renal excretion, such symptoms affording evidence of extensive disease in the kidney, which, if it have gradually advanced to that degree by a process of chronic inflammation, is but very little under the influence of treatment. The "granular casts", *per se*, indicate merely the *form* of disease, and not the stage of its progress, or the degree of mischief which it has produced. Still the existence of these casts is a very important sign, being present from the very commencement of the chronic desquamative process. They may often be detected before the disease is so far advanced as to render the urine albuminous; and at this early stage of the disease we have most reason to expect that our remedies will be successful. Further, the proportion of this granular material in a given quantity of urine, affords an index of the rate at which the disease is progressing. The granular casts are composed of disintegrated epithelial cells, which, being thus shed, appear in most instances not to be reproduced; the greater, therefore, the quantity of this material discharged with the urine, the more rapid must be the destruction of the secreting tissue of the kidney, and the more speedy will be the occurrence of urgent symptoms from suppressed secretion. In the extreme stages of chronic desquamative disease, the granular casts sometimes disappear more or less completely, and are replaced by casts of a very different kind, as will be seen in the history of the succeeding case.

It may be well to remark in this place, that there are at least two circumstances, under which the occurrence of granular casts does not indicate the chronic disease above alluded to. A moderate amount of care will, however, in either case prevent an error of diagnosis. *First*, after an attack of acute desquamative nephritis, it commonly happens, that for some days, while the urine is returning to its normal condition, casts composed of disintegrated epithelium and blood are discharged with the secretion; these gradually diminish in number, and soon entirely disappear. *Secondly*, after an attack of renal hæmorrhage, some blood, which has remained in the tubes, becomes disintegrated and washed out in the form of granular casts, which, however, have generally a yellowish-brown blood-colour, and this would suffice to distinguish them from the epithelial granular casts. In addition to this, the occurrence of hæmaturia would be almost conclusive evidence of the non-existence of chronic desquamative nephritis, the extremely thickened condition of the blood-vessels in that disease rendering the occurrence of renal hæmorrhage, at least in the advanced stages, a very rare accident.[1]

In one case of scurvy, I observed yellowish-brown granular casts, which I at first supposed to be indicative of chronic desquamative

[1] Upon this point, see the author's paper, before alluded to, in *Med.-Chir. Trans.* vol. xxxiii.

disease, but which I subsequently found to be composed of disintegrated blood-corpuscles and fibrine. The man quickly recovered under the care of Dr. Todd, in King's College Hospital, and, in a few days, the casts entirely disappeared.

Case III. Acute desquamative Nephritis passing into chronic desquamative disease, with granular Casts in the Urine, and subsequently a waxy Deposit in the Kidney, with "Waxy Casts" in the Urine—scanty Secretion—Pericarditis—Pleurisy—Death. John Revels, aged 30, a labourer, of temperate habits, but much exposed to wet and cold in his work. About seventeen years ago, he was ill for a month with dropsy, but recovered completely. His present illness began about seven or eight months ago, after getting wet through while at work, and standing for some hours in his wet clothes. After this, he felt "chilly, and shivering and miserable"; the breathing soon became oppressed; and he began to suffer from head-ache, which had continued until the present time; he had gradually grown pale and weak, and had lost flesh; there had occasionally been slight swelling of the face and hands. He had suffered much from dyspepsia, and once had bleeding from the nose to a considerable extent, since which he had discontinued his work, on account of weakness. He reported of the urine, that at the commencement of his illness, it was very high-coloured—"like porter"; and that it was at the same time scanty; but that it soon recovered its natural appearance, and became more abundant than natural. He had sometimes got up four or five times during the night to pass water, and had passed as much as three quarts in twenty-four hours.

This sequence of phenomena is very commonly observed in cases of acute desquamative nephritis; the urine being at first scanty, and darkly tinged with blood, and shortly afterwards becoming paler and much more abundant than in health. I have suggested an explanation of this abundant secretion of urine in a paper "On the Inflammatory Diseases of the Kidney", published in volume xxx of the *Medico-Chirurgical Transactions.*

The preceding narrative brings the history of the patient to the 17th Nov. 1847, when he first came under my observation. It was then noted, that he was of middle height, muscular, but the muscles flabby; hair light; face and lips very pallid. He complained chiefly of weakness, and slight headache; his breath was short, on making any exertion; the sounds of the heart were normal. Pulse 88; skin cool; tongue clean; no thirst; appetite good; but he was much distressed by flatulence for about two hours after eating. This is one of the most common and distressing symptoms in cases of chronic renal disease. He passed about four pints of urine in twenty-four hours, of specific gravity 1012. It deposited a rather abundant dense whitish precipitate, composed of dark granular casts (probably disintegrated epithelium), with some scattered renal epithelium; there was no blood nor crystals; albumen was present in small quantity. The nature and the amount of the sediment at this time indicated rapidly progressing chronic desquamative disease. (See p. 113.)

November 20th. I admitted him into King's College Hospital, under

the care of Dr. Todd. On the 24th and 26th the urine was again examined, with the same result as before.

December 11*th*. The urine had the same characters as before. During the last twenty-four hours he had passed four pints (16oz.), and 4 oz. He was getting worse; his face was pale, and puffed; the countenance was heavy; he complained of weakness and drowsiness, and occasionally vomited after his meals.

December 16*th*. I now first observed what I propose to call the "waxy casts"[1] in the urine, mixed with the dark granular casts before mentioned. The waxy casts were of a yellowish white colour, very much resembling wax; they had a well-defined outline, and a diameter of about 1-400th, or 1-500th of an inch; they did not entangle epithelial cells; but some contained, here and there, a few small nuclei, about the size of blood corpuscles.

December 20*th*. The waxy casts were more numerous in proportion to the granular casts. The urine had a specific gravity of 1012; albumen was moderately abundant.

December 27*th*. The legs were swollen, and pitted on pressure.

January 1*st*, 1848. He had shortness of breath, and uneasiness about the heart. Pulse 96.

January 4*th*. The countenance was anxious; a loud double friction sound was heard over the heart. Pulse 120. Respirations 32. He passed less urine, perspired freely, and vomited frequently.

January 5*th*. Feeling that he was beyond hope of recovery, he insisted on being removed to his own house, where he gradually sank. The urine became very scanty. A catheter was once passed, under the idea that the secretion was retained in the bladder; but scarcely any was found there. At length he became delirious; and died on the 11th January.

Post-mortem Examination two days after Death. The body was well-formed, and muscular, very little emaciated; the skin was very pallid. The pericardium contained a moderate quantity of serum. The surface of the heart was roughened with recent lymph; the heart was larger than usual; the left ventricle was dilated, and its walls were very thick; the valves were all healthy. There was some lymph on the right pleura, in contact with the pericardium. The lungs were congested, but in other respects healthy.

Kidneys. The cortical substance was thinned, and contained a yellowish-white, firm, waxy material, which, on the surface, formed projecting granules, varying in size from a pin's head to a large pea. In parts, where this material was most abundant, the tissue was anæmic; where it was less abundant, the vessels were congested. On the surface of one kidney there was a cyst, of the size of a large pea. Some of the tubes were crowded with epithelium, some contained granular particles of disintegrated epithelium, others were denuded; and others, again, contained the same wax-like material which had formed the casts already described as existing in the urine. At the same time, I noted an appearance of fibrous tissue, which I then supposed to be the result of conversion of the basement membrane of the tubes into

[1] The term *waxy* is applicable only to the appearance, and not to the chemical composition of the material, which is probably of a fibrinous or albuminous nature.

fibrous tissue, but which I have since ascertained to be hypertrophied arterial walls. With reference to this point, I must again refer to my paper in the thirty-third volume of the *Medico-Chirurgical Transactions.*

Remarks. This case was evidently, at the commencement, one of acute desquamative nephritis. If at this time the patient had been subjected to proper treatment, which would have implied a temporary discontinuance of his work, and a strict avoidance of exposure to wet and cold, there is reason to believe that he would soon have been restored to health. The poor man, however, did not apply for assistance until the disease had become chronic, and had advanced beyond the stage at which treatment could be of any avail. The most interesting point in this case, is the observation of the first appearance of the "waxy" casts in the urine, their mixture with the granular casts, and subsequently the increased number of the former in proportion to the latter; their appearance in the urine being, doubtless, simultaneous with the deposit of the wax-like material in the kidney, and this material being probably secreted by those tubes which had previously lost their epithelial lining.

The following case, in some points, resembles that of Revels; but in other respects it differs materially. It possesses a peculiar interest.

Case iv. Numerous attacks of Gout—Chronic Desquamative Nephritis—Urine Albuminous—a very few Waxy Casts — almost Complete Suppression — Urinary Tubes Denuded — Renal Arteries and Malpighian Capillaries thickened. Thomas Hewson, æt. 49, a coachman, had always drunk freely of porter,—on an average half a gallon daily. At the age of twenty-five he had inflammation of the chest; and during this attack he was first seized with gout in one great toe. About three or four years after this, he had a second attack; since which the attacks had returned with increased frequency, and had, at different times, affected almost every joint. For several years before his death, he was disabled by gout for about nine months in each year; his diet had consequently been very poor. This is one amongst a great number of instances, with which I have met, in which a labouring man has brought upon himself and his family long-continued severe suffering and privation, by an intemperate use of London porter. I attended him frequently as a dispensary patient, for attacks of gout, before I had any suspicion of renal disease.

June 7th, 1849. I examined the urine. It had a specific gravity of 1015; it was pale, and deposited a very slight cloud, containing a few well-defined "large waxy casts", similar to those observed in the preceding case, but very much less numerous. Scarcely a particle of renal epithelium could be seen. The urine contained a large quantity of albumen, becoming almost solid when boiled. The patient was of rather small stature; his hair and whiskers were sandy; his face pallid; he was considerably emaciated. During the last two years, the legs had occasionally become œdematous after sitting up; and the face had sometimes been slightly swollen, but there was now no appearance of dropsy. A short time since he had an attack of gout; but he now complained chiefly of weakness, which confined him to bed.

The joints were free from deposits and distortions, except a slight contraction of the fingers of one hand. His wife observed that, during the earlier attacks of gout, the urine was generally high-coloured and turbid, but that latterly it had remained pale and free from deposit. He was ordered to take small doses of tincture of sesquichloride of iron.

June 18*th and* 27*th*. The urine was examined, with the same results as before.

July 3*rd*. During the last fortnight, he had become deaf. He was much changed in appearance; he sometimes appeared confused in his intellect; the limbs frequently moved in a chorea-like manner. He was very pale and thin, and complained of an acrid taste in the mouth. His breath was fœtid; he had occasional bleeding at the nose; there was frequent vomiting. The urine was scanty; the quantity obtained was insufficient for ascertaining its specific gravity; it was highly albuminous, and threw down a rather copious dense precipitate, of a whitish brown colour, composed of numerous *waxy casts, varying in diameter from* 1-375 *to* 1-750 *of an inch*. There was no epithelium, either entire or disintegrated. He was ordered to have an effervescing draught every four hours.

July 7*th*. He was worse; had frequent vomiting, and severe headache. He had passed only about two ounces of urine during the last twenty-four hours. It was light coloured, very albuminous, and had a very slight sediment, containing traces of the same casts as before. The effervescing draughts were repeated; and a quarter of a grain of elaterium was prescribed, to be taken immediately.

July 10*th*. He was much the same. The urine amounted to about four or six ounces in twenty-four hours. Yesterday its specific gravity was 1016; this day it was 1019; it was pale, highly albuminous, and had a very scanty sediment, with traces of the same casts as before.

July 14*th*. He was much the same, but more exhausted, and very pallid; the skin was cool. He became suddenly faint; and died soon after my visit, retaining his consciousness and power of speech until within a few minutes of his death.

Post-mortem Examination on the fourth day after Death. The weather being warm, and putrefaction having commenced, the kidneys were removed by an opening in the abdomen; no other parts were examined. Both kidneys had much the same appearance. Their size was rather less than normal; one weighed 3½oz. The surface was smooth. In the cortical substance of one, there was a cyst about the size of a horse-bean. They were slate-coloured, from incipient decomposition. The chief structural change visible to the naked eye, consisted in the absence of the usual lobular appearance on the surface. The cortical substance was rather thin; but an unpractised observer might have pronounced the kidneys healthy. On a microscopic examination, the Malpighian bodies appeared very conspicuous, while the tubular structure was confused and indistinct. After the addition of acetic acid, the tubes became much more distinct; many were denuded and atrophied. Scarcely one could be seen with the normal epithelial lining; some contained oil; others, brown granular particles of disintegrated epithelium; and a very few contained the white waxy material, which had formed the casts observed in the urine during

life. In consequence of the atrophy of the tubes, the Malpighian bodies seemed relatively more numerous, and closer together than ordinary; they were not perceptibly enlarged; one of the largest measuring 1-75th of an inch. The Malpighian tufts were of a dull white colour; the surface of the vessels was smooth, their coats thickened, their canals clearly visible in many instances, especially after adding acetic acid, which also brought into view the blood-corpuscles in their interior. The coats of the arteries were hypertrophied; and the canal of one contained some small masses of oil.

Remarks. There can be little doubt that the morbid process, in the case of Hewson, was essentially the same as in that of Revels; and that the urine, if examined at an earlier period of the disease, would have presented the granular casts, which an examination of a great number of cases of this disease has shown to be quite characteristic. In this case, the desquamative process had continued until nearly all the tubes had lost their epithelial cells; and, then, as a necessary consequence, secretion was almost completely arrested. There was one remarkable difference between the two cases; the wax-like material, which was deposited so abundantly in the kidneys of Revels, was, in the case of Hewson, only just sufficient to afford the data for a correct diagnosis and prognosis.

Immediately after the case of Hewson, another essentially like it occurred to me in a woman named Brooks. The urine had the same characters, and contained the peculiar large waxy casts. The kidneys presented the same general and microscopical appearances.

When the urine is pale, and of rather low specific gravity, containing a large quantity of albumen, with a scanty sediment, composed of the peculiar large waxy casts, as before described, with little or no epithelium, either entire or disintegrated, it may be almost certainly inferred that the chronic desquamative process has destroyed the secreting cells of the kidney; and that if urgent symptoms of suppressed secretion are not already present, they will very speedily appear.

I have several times spoken of the waxy casts as being "large", and I have given the diameter of those observed in the urine of Hewson. My reason for doing so has been, that as the diameter of these casts was equal to the average diameter of healthy kidney tubes, *their size was sufficient evidence that the tubes, in which they had been moulded, had no epithelial lining, and were composed only of basement membrane*, as the post-mortem examination of the kidneys proved to be the case.

I will now give the particulars of a case in which what I propose to call "*small* waxy casts" were observed, and which formed the ground of a favourable prognosis, which the result proved to have been correct.

Case v. Intemperate Habits with an insufficiency of nutritive Food—general Dropsy—ecthymatous Eruption over the Body—Urine highly albuminous, and containing "small waxy" Casts—Recovery. George Henry Lewis, aged 45, of intemperate habits, much reduced in circumstances, and latterly living very badly, was admitted into King's College Hospital, under the care

of Dr. Budd, on the 6th June 1849. He was suffering from general anasarca and ascites in a very great degree, and his body was covered with an ecthymatous eruption. He was very pallid; his breathing was difficult, and accompanied by a wheezing sound. The dropsy had appeared two weeks before, and the eruption a month earlier. The sounds of the heart were normal. The urine was scanty, rather light-coloured, somewhat cloudy, of specific gravity 1012, becoming almost solid with albumen when boiled. After standing, it deposited a pretty abundant whitish dense precipitate, chiefly composed of *transparent waxy casts, about one-thousandth of an inch in diameter.* Very few epithelial cells were seen, and no blood-corpuscles, or very few.

Few, probably, who saw the miserable condition of this poor man at the time of his admission, would have given a favourable prognosis; but after a microscopical examination of the urine, I ventured to suggest to my friend Dr. Budd the probability of his patient's recovery, for the following reasons. The appearance of the casts seemed to indicate merely congestion of the Malpighian capillaries, and an absence of disease in the epithelial cells. The diameter of the casts proved that they were moulded in canals lined by epithelial cells; in this respect forming an instructive contrast with the casts in Hewson's case (p. 117). The almost entire absence of epithelial cells from the urine showed that the secreting structures were but little involved; since any morbid matter in the blood, injuriously affecting the secreting cells, would have produced a desquamation of these structures. The inference was, that the blood was in such a morbid state as produced congestion of the Malpighian capillaries, while it affected but slightly, if at all, the secreting cells of the kidney. As a consequence of the congestion, coagulable matter with serum escaped from the Malpighian vessels, and, after being moulded in the tubes, was washed out with the urine, forming the "small waxy casts" already described.

He was first put on milk diet, and was ordered to have a tepid bath every morning, and to take small doses of solution of citrate of ammonia, with fifteen minims of ipecacuanha wine, every six hours. He began to improve almost immediately. It may be well to mention here, that for several years he had been subject to epileptic fits, which returned with increased frequency while he was suffering from the dropsy.

The urine was frequently examined, and its condition carefully noted. The albumen continued very abundant for about six weeks. The quantity passed in twenty-four hours did not exceed one pint when he was first admitted, but soon became more abundant, and for some days exceeded the normal quantity. Thus, on the 18th June, it measured five pints. In this increased flow of urine, following upon a scanty secretion, the case resembled one of acute desquamative nephritis (see p. 114).

June 25th. It was now first noted, that some of the casts entangled a few oil-globules, and here and there appeared a cell containing oil. These appearances continued for about three weeks, and occasioned some anxiety lest the kidneys should undergo fatty degeneration; the more so, as the albumen was still very abundant.

About the middle of July, the oil was evidently diminishing, and the casts were less numerous; but the albumen was as copious as at the commencement. The specific gravity of the urine was 1014.

July 26th and 27th. The albumen was reported to be much less, so that there was scarcely more than opalescence when the urine was boiled. The urine was clear; there was no cloud or sediment after standing, nor anything visible by the microscope. In the meantime, the eruption and the dropsy had entirely disappeared, his appetite and strength had returned, and the pallor of his face had been replaced by a healthy hue. Since the 26th June he had been taking steel, sometimes in the form of citrate, and occasionally in that of tincture of the sesqui-chloride.

July 30th. He was progressing favourably; had improved in all respects. The bowels were regular; the tongue clean; he slept well. The urine was scarcely albuminous.

August 1st. He left the hospital without leave, and has not since been heard of.

Remarks. It is instructive to compare the history of this case with those of Revels and Hewson. In appearance, the condition of Lewis, when he first came under observation, was much more desperate than that of the other two. The microscope was the only means of determining that the probability of recovery in each case was precisely the reverse of that which, to a superficial observer, it might appear to be.

I will conclude this communication with a few remarks on the Diagnosis of Fatty Degeneration of the Kidney; one of the most intractable, and unhappily one of the most frequent of the forms of renal disease.

The urine, in cases of fatty degeneration of the kidney, has characters sufficiently distinctive to render the diagnosis a matter of ease and certainty. It is commonly of a rather pale, yellowish colour. When first passed, it is clear; but, after standing for some hours, it usually deposits a light, cloudy sediment; sometimes, in the early stages, the urine has a dark smoky colour, from containing blood. The quantity secreted is less than normal, and its density in most cases exceeds the healthy standard; it is by no means unusual to find the specific gravity ranging from 1025 to 1030. The albumen is generally very abundant, so that, when boiled, the urine becomes almost solid. On a microscopic examination of the cloudy sediment before mentioned, there may be seen transparent casts of rather small size, in many of which are entangled oil-globules of various sizes, also cells containing oil-globules in greater or less abundance. There are besides scattered cells, more or less completely filled with oil. I might transcribe from the pages of my note-book many cases, in which the urine has presented more or less of the characters here described, and in which not one of the patients has recovered. The majority of these cases have terminated fatally; while, in a few instances, the symptoms continue in a greater or less degree; the urine continuing highly albuminous, and presenting unequivocal microscopical evidence of the true nature of the disease. For the purposes of prognosis, it is as important to distinguish between a case in which the urine presents the characters here described, and a case of simple desquamative nephritis, as it is to distinguish tubercular disease of the lung from acute pneumonia or bronchitis.

Now, since the prognosis in a case of confirmed fatty disease of the kidney is thus unfavourable, it is important that all who examine the

matter should clearly understand that albuminous urine may contain a certain amount of oil, entangled in fibrinous casts, or enclosed in epithelial cells; and yet the disease may be of a simple nature, and may speedily terminate in recovery. It is very common to find small quantities of oil in the casts and in the cells, after a simple inflammation of the kidney has existed for three or four weeks. Now, since an inflammatory disease does in some instances become chronic, and terminate in confirmed fatty degeneration, the appearance of any oil in the urine must occasion a certain degree of anxiety, lest it should increase in quantity, and take the place of the simple inflammatory products. In the case of Jervis, it will be remembered that oil was seen in the casts and in cells, that it continued for several days, and then entirely disappeared simultaneously with a rapid decrease in the quantity of albumen. The following brief notice of a case will serve as an example of what may frequently be observed.

Case vi. Acute desquamative Nephritis, with general Dropsy; Urine scanty, highly albuminous and containing fibrinous Casts, Epithelium and Blood—subsequently oil in the Casts and Cells—Complete Recovery. John St. Ledger, aged 49, a billiard-marker, applied to me at the Dispensary on the 12th April 1847, and gave the following account of himself. During the period of Lent, he had fasted very rigidly, *i. e.* during four days in the week he took only one meal a day, composed of fish, with milk and potatoes; during the remaining three days he took animal food as usual, perhaps rather in excess. Under this plan of diet he found himself getting thin and weak, and he became very dyspeptic and flatulent after his meals. On Easter Monday, April 5th, he felt drowsy, and had muscular pains. The next day, dropsical swelling appeared, and the urine was very scanty. He continued to get worse until the 12th April, when he first came under my notice.

There was then slight general dropsy, head-ache, and drowsiness; the urine was scanty, high-coloured, and very albuminous. It presented the characteristic appearances of simple acute desquamative nephritis; containing fibrinous casts, entire epithelial cells, and blood corpuscles. During the first few days he was much benefited by cupping, warm baths, purging, and diaphoretics.

A careful microscopical examination of the urine was made almost daily. Its characters remained the same until the 29th April, when, for the first time, it was seen that many of the epithelial cells contained oil-globules. At that time, I knew much less of the history of this disease than I now do; and I quite despaired of my patient's recovery. Day after day the oil was visible, some cells being completely filled with it; but, at the same time, *by far the greater number of cells were entirely free from oil*, and this is the circumstances which, with my present knowledge of these cases, would have suggested to me a favourable prognosis. Early in the month of May the dropsy disappeared, but the patient continued very weak and pallid.

May 6th. He began to take a draught three times daily, consisting of diluted nitric and diluted hydrochloric acids, ten minims of each, in infusion of quassia.

May 31st. The above medicine was discontinued, and he took an

ounce of compound mixture of iron three times daily. Soon after the change of medicine, he began to gain strength, and to improve, in every way, very rapidly.

June 14th. The quantity of urine was three pints in twenty-four hours; of specific gravity, 1017; the colour was natural, the albumen much diminished. It contained a few casts, with epithelium more or less disintegrated, and scarcely a trace of oil.

At the beginning of July, the urine was free from albumen, and presented no trace of oil, but a very few casts with disintegrated epithelium; he was gaining strength, and was much improved in appearance. Once after this, there was a temporary return of albumen, but it soon disappeared, and he completely regained his health and strength. He has occasionally since been under my care for trifling ailments; I have several times examined the urine, and have found it, in every respect, quite healthy.

3, Woburn-square, Dec. 31, 1850.

ON THE INHALATION OF VARIOUS MEDICINAL SUBSTANCES.

By JOHN SNOW, M.D.

The following are the chief reasons why it may be desirable to give medicines, in some instances, by Inhalation, in preference to the more ordinary method by deglutition.

1. As the influence of the medicine appears immediately, and a greater surface is offered for absorption, a larger dose may be given, and a more sudden and profound effect produced on the economy than it would be safe, or, in some cases, even possible to produce in any other manner. An instance in point is the insensibility induced by chloroform and ether.

2. The process of digestion is less interfered with, than by taking medicines into the stomach.

3. Many medicines which have a disagreeable taste—as turpentine, creasote, and camphor—are not unpleasant when inhaled in the form of vapour.

4. Agents, such as benzoic acid, and some of the gum-resins, which are believed to exert a local action on the mucous membrane of the air-passages, may be expected to have a greater effect when inhaled, than when they are taken into the stomach in the same doses, and reach the lungs only through the circulation.

5. Some agents, as chlorine and ammonia, have a local action when inhaled, which they could not exert if exhibited in any other way.

It was almost solely with a view to their local action that medicines were inhaled, prior to the discovery at Boston, in America, of etherization, which established a new era in inhalation; and even at the present time, with the exception of ether and chloroform, hardly any medicines are exhibited by inhalation, unless in affections of the lungs; although there evidently ought to be no such limitation of the practice.

It must be acknowledged in the outset, however, that it is a much less simple and easy matter to have medicines properly inhaled, than to direct them to be swallowed; and it is the object of the present communication rather to attempt the removal of difficulties, and to point out the physical conditions under which certain medicines can be inhaled, than to detail the results which have been obtained by inhalation.

Owing to neglect of the physical properties of a medicine, it has sometimes been supposed to be inhaled, when in fact it was not, unless in a quantity almost infinitesimal. It has not been unusual, for instance, to direct a drachm or two of tincture of hyoscyamus or conium to be put into half a pint or a pint of hot water, in order to be used for inhalation. Now the virtues of an infusion of these plants remain in the extract, after the water is all evaporated at a moderate temperature; and if the patient had inhaled day after day from the same water (having it made hot for the purpose), till it had all been consumed, the medicine would have been found at the bottom of the vessel in the form of an extract, to which water might have been added for the process to be commenced afresh. It is obvious, therefore, that any effects which have been produced by inhaling in this manner, were due either to the vapour of the water, which is very beneficial in irritable states of the mucous membrane, or to physical causes depending on the construction of the inhaler, and the mode in which it was used.

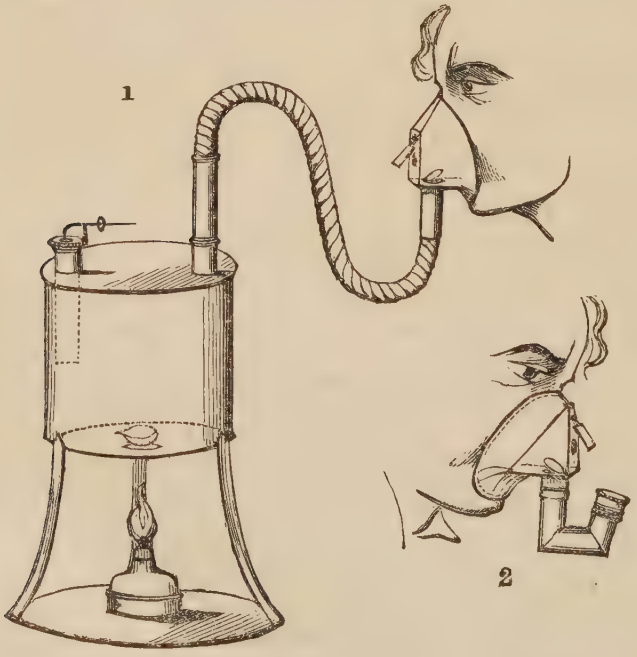
The most important of the additions to the mechanical means for inhalation, which followed the discovery of etherization, is the flexible face-piece, to include both the nostrils and mouth. Dr. Sibson introduced this, although Dr. Hawksley contrived a similar one about the same time. It is shewn in the engraving, which accompanies this paper, in the modified form in which I use it. The sides and margin, which form the flexible part, consist of thin sheet lead, lined with oiled silk, and covered with leather. The expiratory valve can be moved more or less to one side from the opening it covers, so as to admit unmedicated air, whenever the vapour feels too pungent. The advantages of a face-piece of this kind are, that it can be fitted to every variety of face; that the patient requires no instructions, having nothing to do but to continue breathing in his usual way, either by his mouth or nostrils, as he pleases; and that it imposes no labour on the respiratory muscles, for when applied to any suitable form of inhaler, it may be kept attached to the face for any length of time without fatigue. As I recommend the face-piece in every kind of inhalation (except where substances have to be drawn into the larynx in the form of powder, when a glass tube may be used), it has been described before treating of individual medicines, to which attention may now be directed.

I. INHALATION OF MEDICINES WITH THE AID OF HEAT.

A. IN THE DRY WAY. OPIUM, it is well known, is very extensively inhaled, in China and India, as an indulgence; but it has not been much used in this manner in the practice of medicine, so far as I am aware. I sought to ascertain the temperature at which the active ingredients of opium are given off, and whether the effects of the fumes are due to morphia, or to new products generated by the heat applied. For this purpose, I heated morphia and the meconate of this alkaloid in an oil bath, using a long narrow

test-tube, on the recommendation of Dr. Bence Jones. I find that neither pure morphia nor the meconate are volatile, unless the heat be raised till they begin to be decomposed. This occurs at about 400° Fahr., when they become brown, and a brown sublimate begins to be condensed in the interior of the tube. The sublimate obtained from morphia is slightly reddened by nitric acid, but is not altered by the perchloride of iron. The sublimate from the meconate gave the same results, except on one occasion, when some minute colourless crystals were sublimated from it, at a temperature of from 380° to 400°. These were rendered of a deep red by nitric acid, and were reddened also by the perchloride of iron. We may conclude, therefore, that the effects produced by the inhalation of opium are chiefly, if not altogether, due to the generation of new products by the heat applied.

For the inhalation of opium, the Chinese use a pipe of a peculiar construction, which they heat over a spirit lamp. The preparation which they use is the watery extract, and the quantity employed at one time is said to be a piece about the size of a pea; but whether the dose requires to be increased with the habit of using it, as happens when opium is taken into the stomach, I have not been able to learn. The Chinese opium-pipe is too complicated for general use by patients, and anything in the form of a pipe would be liable to misuse; as Europeans, with the exception of the Turks, use a pipe merely to draw the air into the mouth and puff it out again, instead of inhaling with it, as I believe is the practice in all eastern nations. I have therefore contrived an inhaler, which is adapted for a great number of other medicines as well as opium. (Fig. 1.)



1. Larger Inhaler. 2. Smaller Inhaler.

It is made chiefly of tin, and consists of a cylindrical chamber, between four and five inches in diameter, and three or four inches deep, under the centre of which a spirit lamp is placed. The bottom of the inhaler consists of a thin piece of talc, on which is placed a small capsule of Berlin-ware, for the purpose of holding the extract of opium. A porcelain funnel-holder, which is placed on the talc, keeps the capsule exactly over the flame of the lamp. The talc allows sufficient heat to be transmitted to the opium, without conducting it to the sides of the inhaler, and, consequently, the air which is inhaled is not unduly heated. The lid of the inhaler is moveable; it is provided with a delicately balanced valve for the admission of air, and is connected with the face-piece before mentioned, by means of an elastic tube of wide calibre, as shewn in the engraving.[1]

The extract of opium, in the form of a pill, is placed in the capsule without any addition, and the spirit-lamp is lighted beneath it with a very small flame, which may be increased if requisite. The patient begins to inhale immediately the lamp is lighted, and continues to do so as long as anything is given off. The moisture contained in the extract is first expelled by the heat and inhaled, then follow the active principles of the opium, accompanied, after a time, with some smoke, and nothing is left but a porous carbonized mass. The process, being conducted slowly, usually lasts about ten minutes. If the volatile products be too irritating at any time, and excite coughing, the spirit-lamp should be removed for a minute, the inhalation being continued, however, in the mean time. The patient learns very soon to accommodate the process to his tolerance of the vapour, the pungency of which is very slight.

At the Hospital for Consumption at Brompton, the physicians to which institution kindly invited me to assist in contriving and superintending the inhalation of medicines, a considerable number of patients have inhaled opium during the last twenty months,—some of them having inhaled every evening for several weeks in succession, and discontinued only on leaving the hospital. Three or four of the patients had emphysema with chronic bronchitis; but the majority had phthisis, with cavities in the lungs—cases, in which the cough was more than usually troublesome, being generally chosen. The cough was relieved by the inhalation in the greater number of cases, and many of the patients increased in weight, and improved considerably in general health. Other remedies were used at the same time, and contributed to the improvement, but it seemed to be in part due to the inhalation. It has caused constipation of the bowels in only two or three of the patients; I have, however, experienced that effect when I have inhaled it for experiment. The quantity of watery extract of opium inhaled at one time has generally been two grains; but, in a few cases, three grains have been used. Crude opium was used in one case, instead of the watery extract; but the fumes it gives off are more irritating to the bronchial membrane, than those from the latter agent.

Morphia is, in my opinion, the most suitable preparation of opium for inhalation; but I have not recommended it at the Brompton Hos-

[1] The Inhalers are made by Matthews, Portugal Street.

pital, on account of its expense. It has, however, been inhaled by one patient, in the dose of half a grain, and I have inhaled it in the same quantity. It is much easier and pleasanter to inhale than the extract of opium, the extractive matter of which supplies some smoke, which is probably quite inert. It is of service to mix the morphia with a little dry plaster of Paris, to give it more weight and bulk.

With respect to the doses just mentioned, it should here be remarked that a medicine, when inhaled, cannot be all absorbed, as usually happens when it is taken into the stomach, for only part of it reaches the lungs, whilst another part is expired again with the air which has occupied the nostrils or mouth, the larynx, trachea, and larger bronchi. I am inclined to believe that about one-half of what is inhaled is usually absorbed; for, on inhaling air charged with vapour of chloroform from a bladder or small balloon, I experienced as much effect from ten minims, when it was breathed backwards and forwards for a minute or two, as from twenty minims, when the air was only breathed once.

Extract of Stramonium has been inhaled in the Brompton Hospital, with more or less relief, by five or six patients affected with asthma. Four grains were used, in the same manner as opium. The spirituous extract of aconite was used also by one patient, in the quantity of a grain; and it is probable that other extracts might be employed with advantage, in the same manner.

Gum-Resins. The fumes given off by these medicines may be inhaled in the same way as opium; but, as these fumes are pungent when in large quantity, it is advisable to powder two or three grains of the gum-resin, and mix it with about ten times as much of some inert powder, as gypsum, before exposing it to heat in the capsule. Used in this way, ammoniacum gives off a very fragrant odour, and, though rather pungent, can be inhaled very well by most persons. With steam the gum-resins can be easily inhaled, as the quantity of vapour which they give off, at the temperature of boiling water, is small. In this way, however, the patient gets no great amount of the medicine; but probably enough to exert some local action.

b. With Vapour of Water. For the inhalation of medicines along with the vapour of water, I employ the above-described inhaler, using a somewhat larger earthenware capsule than for inhalation in the dry way. Into this capsule or dish, about half an ounce of water is put, together with the medicine to be inhaled. The water is heated by the spirit-lamp, sometimes till it boils gently, but generally to a point rather short of boiling. This quantity of water yields as much vapour as a patient can conveniently breathe in about half an hour; and a much greater amount of the medicine can generally be inhaled than if it were placed in a larger quantity of water. In the case of some substances, indeed, as iodine, oil of turpentine, and camphor, which are particularly adapted for inhalation in this manner, the medicine is all inhaled before the water is finished.

Iodine may be most conveniently inhaled, by adding a small quantity of a strong spirituous solution of it to half an ounce of water. Twelve minims of the iodine tincture of the *Dublin Pharmacopœia*, containing one grain of iodine, are a suitable dose. The advantage

of adding the iodine in the form of tincture is, that it becomes equally diffused through the water. As the patient inhales, the water becomes less and less deep in colour, and by the time that he has inhaled about three-fourths of the water, he has inhaled the whole of the Iodine; and the remaining water is colourless. On account of its irritating effects on the stomach, it would probably be advisable that iodine should be given by inhalation, in every case in which its exhibition is required. Allusion is here made only to iodine, and not to the iodide of potassium, which, not being volatile at the heat of boiling water, cannot be inhaled in this manner. I very much doubt whether phthisis be one of the diseases to be benefited by iodine. It was inhaled by eighteen patients at Brompton, in the summer of 1849, and the following autumn and winter; they generally commenced with half a grain, and it was increased, in one or two cases, to two grains; but the usual dose was a grain once a day. In two or three cases it was discontinued, as it seemed to increase the cough, and one or two of the patients complained of head-ache from its use. It was continued, however, for more than a month, in ten of the cases; and I was present on nearly every occasion, to see it inhaled. It may consequently be said to have had a fair trial; but no benefit could be observed to follow its use. It was not inhaled as above recommended, but from a Woulfe's bottle, over the interior of which its spirituous solution was diffused; no artificial heat nor vapour of water was employed; the inhalation was continued till the iodine had disappeared. There were consequently no extraneous circumstances to interfere with its action.

Oil of Turpentine has been inhaled in a few cases, by putting twenty drops of it, with about half an ounce of water, into the capsule; the spirit-lamp being placed underneath, as usual. The boiling point of oil of turpentine is much higher than that of water; but owing to the great density of its vapour, as compared with steam, it evaporates more quickly than water, as happens with iodine, and consequently it is all inhaled before the water is consumed. The cough has appeared to be relieved in the cases in which it was used. One was a case of hæmoptysis, which subsided under its use, as, however, it might have done without it.

Camphor can be conveniently inhaled by putting thirty or forty drops of the tincture into half an ounce of water. It is usually consumed as soon as the water with which it is mixed. It has appeared to relieve the cough, in a few cases in which it has been used.

Benzoic Acid can be inhaled with the vapour of water. If six grains be put into half an ounce of water, the patient will inhale about half of it, and should leave off before the water is quite dried up, to avoid the pungent fumes which would otherwise arise. For the next inhalation, some water and about three grains more of benzoic acid can be added to that which remained. I have not seen sufficient of its employment to speak of its effects.

Creasote may be best inhaled in the same manner. If not more than about four drops be put into the half ounce of water, all of it will be inhaled. I have generally given creasote, however, with the inhaler marked number 2 in the engraving. Several patients have inhaled it at the Brompton Hospital, generally using three or four drops twice a-day. The benefit from its use has not been very great, but might

probably have been greater, if it had been inhaled with vapour of water, which itself is serviceable.

II. INHALATION OF MEDICINES AT THE ORDINARY TEMPERATURE.

The smaller inhaler, shewn in the engraving, was contrived for the inhalation of chloroform in medical and obstetric cases. It is made of brass tube, rather less than an inch in diameter, and is lined with bibulous paper to absorb what is put in, and afterwards yield it up in the form of vapour as the patient inhales. It is adapted by a screw to a face-piece similar to that employed with the other inhaler. It is not my intention to speak of chloroform on the present occasion. Amongst the other medicines which have been inhaled with it, are hydrocyanic acid and conia; and it is adapted for the inhalation of almost any agent that does not require the application of heat.

Hydrocyanic Acid has been inhaled by several patients at the Brompton Hospital, but it has not seemed to produce any good effects which would not have resulted from its use by deglutition. The quantity inhaled was generally twice as much as one would give by the stomach, and it was somewhat diluted with water, to diminish the pungency of the vapour, and enable the nurse to measure the quantity more easily in the minim glass.

Conia, the volatile alkaloid of spotted hemlock, has been inhaled by several patients. Some of this active principle having been kindly given to me by Mr. Morson, I first tried small doses on myself, and found that a minim of it could be inhaled without inconvenience. This was the quantity usually administered, although two minims were inhaled in a few cases. Dizziness was caused by it in many instances, especially when the larger dose was employed, but this effect subsided in less than an hour. The cough was usually relieved by it, and in two or three cases of asthma, the breathing was also relieved. The conia was diluted with nine parts of spirit, both for convenience in giving the right dose, and in order that it might be better diffused over the paper in the inhaler, and offer a larger surface for evaporation.

The following experiment, performed in 1848, on the inhalation of conia, may not be uninteresting, as shewing that this is one of the agents which might be employed for the prevention of pain in operations.

A chaffinch was placed in a covered glass jar, holding 100 cubic inches, and one grain of conia was put in. The bird seemed unaffected for ten minutes, and the jar was opened with the intention of trying a larger dose; a minute afterwards, however, it fell on its side and lay, not relaxed, but like a stuffed bird, as its head did not droop. It moved its legs, now and then, by convulsive starts. It was insensible to pricking and pinching, although, from the appearance and motion of its eyes, it seemed to be conscious all the time. It recovered its sensibility in about two minutes, but was not able to stand for ten minutes. It afterwards appeared well.

In a guinea-pig, in which the inhalation was continued till a fatal effect was produced, violent convulsions occurred before death, and the heart remained irritable afterwards.

Ammonia has been inhaled with great relief in a few cases, in which more or less bronchitis, with difficulty of expectoration, existed.

The inhaler employed was similar to that described by Mr. Smee in the *Medical Gazette* for 1843, except that an elastic tube and face-piece were attached to it. It consists of a Woulfe's bottle with wide apertures, and a tube for the entrance of air, descending a certain way, but *not* dipping into the solution employed. The ammonia was given weaker than by Mr. Smee. Two ounces or so of cold water remained constantly in the bottle; and when it was about to be used, twenty minims of strong solution of ammonia were added, and the patient inhaled for half an hour, or as long as ammonia continued to be given off. The inhalation was repeated twice or three times a day.

It may be remarked, that either ammonia or hydrocyanic acid might be inhaled, along with vapour of water, in the opium-inhaler first described; so that a person provided with it might apply it in almost every kind of inhalation.

Chlorine has been inhaled by a few patients, in different stages of phthisis, but with no advantage, although it was continued by some of them for a few weeks. To obtain it, some chloride of lime was put into the Woulfe's bottle-inhaler, just mentioned, and moistened with a little water. When it was wished to increase the quantity of chlorine beyond the small amount spontaneously given off, the inspiratory valve of the face-piece was prevented from closing completely, and a little of the expired air being thus allowed to get into the bottle, the carbonic acid it contained acted on the lime, and caused chlorine to be liberated.

It will be observed, that the medicines mentioned above have all been recommended to be inhaled, either alone, or with the vapour of water: and, as a general rule, it is better for medicines to be inhaled singly; since, no two being equally volatile, they could not be inhaled, if combined, in the proportions in which they might be mixed. The method of administering medicines by inhalation also being yet as it were, in its infancy, the exhibition of one at a time is better adapted for the collection of correct observations respecting their effects.

54, Frith-street, Soho, January 2, 1851.

REMARKS ON CONTINUED FEVER, AND MORE ESPECIALLY ON THE CONDITION OF THE BRAIN IN FEVER.

By HUMPHRY SANDWITH, M.D., Physician to the Hull General Infirmary.

(*Read before the Hull Medical Society, Oct. 26th*, 1850.)

As Englishmen we must honestly admit, in spite of our proud recollections of what English observation has achieved from the days of Sydenham downwards, that the French have won imperishable laurels in the important field of Febrile Pathology. It is due, indeed, to the memory of Sir John Pringle to assert, that, even a hundred years ago, he caught a glimpse of the doctrine that, when fever proves fatal, it mostly or often does so by the production of certain specific organic lesions. This truth, though crudely stated, is embodied in the assertion, that "he examined ten patients who died of typhus, and came to the conclusion, that, when it proves fatal, it generally terminates

either in an actual mortification of some part, or in an abscess of the brain; but that the intestines are more particularly disposed to mortify."[1] This was in 1750. Ten years afterwards, Rœderer and Wagler, in Gottingen, state, as the result of their dissections in an epidemic typhus, that "they found intense inflammation of the alimentary canal; and that either gangrene and sphacelus occurred in the tract of the large intestines, or else that the mucous follicles of the *small* intestines were enlarged, with similar spots of gangrene or sphacelus."[2] In 1803, M. Prost opened the bodies of upwards of one hundred and fifty persons, who had died of *fièvre ataxique*, "without observing anything remarkable in the brain, but he always found inflammation of the mucous membrane of the intestines, with or without excoriation."[3] Following up these researches, Louis, Andral, Bretonneau, Broussais, Bouillaud, Petit, Serres, and others, have immensely increased our knowledge of fever by their separate contributions to its pathology. Louis was the first to appropriate the term *typhoid* fever to the morbid state which accompanies the lesion of Peyer's glands; an affection first distinctly pointed out by Bretonneau, under the name of *dothinenterite*. It is true that Petit and Serres, as well as Andral and Broussais, had previously described this enteric exanthem through all its stages, but had failed to mark its especial seat in the follicles. Andral objected to the application, by Louis, of the term *typhoid* to the fever accompanying this lesion of Peyer's glands. But recent observations by our contemporary, Dr. William Jenner, warrant the distinctive epithet of Louis, *at least for practical purposes*. For Dr. Jenner, as is well known, has discovered that *a rose-coloured rash* on the skin is characteristic of *typhoid* fever; while *mulberry-spots* are equally distinctive of *typhus*. His experience, fortified by two thousand cases, enables him to assert, that if by the eighth day of the disease the eruption presents the true *typhus*, or *mulberry* character, then, if death ensues, the follicular intestinal lesions will not be discovered. His conclusion is, that the *rose-coloured rash* is generally, though not invariably, associated with the follicular exanthem of *typhoid* fever; but that the *mulberry rash*, characteristic of *typhus* fever, is never associated with that peculiar enteric lesion. An American writer, Dr. Bartlett, is of the same opinion, and asserts "that there is as much difference between *typhus* and *typhoid* fever, as there is between measles and scarlatina."[4] The non-acquaintance of English observers, until of late years, with the follicular exanthem of *typhoid* fever, has led some French physicians, and especially M. Grisolle, to confine the disease to the continent, and to distinguish it from *typhus* fever, which they consider to be peculiar chiefly to England. In the article "Typhus", of the *Dictionnaire de Médecine*, M. Dalmas esteems *typhoid* and *typhus* to be "analogous", but not identical. It may be doubted, after all, whether the distinction can be maintained, except for practical purposes. Nor am I convinced, that *typhoid* and *typhus* are essentially distinct diseases. Both are forms of adynamic fever—mere varieties—exhibiting different phenomena

[1] Williams, Dr. Robert. Elements of Medicine, vol. i, p. 42.
[2] Ibidem. [3] Ibidem.
[4] Dunglison. Practice of Medicine, vol. ii, p. 494.

under different circumstances, the follicular abdominal lesion being generally present in France and America, whilst in England it is comparatively much rarer. "At certain times and places", says Dr. Watson (in other words, in certain epidemics), "the ulceration of the inner surface of the intestines is far less common than in others. It was comparatively rare in an epidemic, of which I witnessed some part in Edinburgh. Then I came to London; and for several years I never saw a body opened after death by continued fever, without finding ulcers in the bowels. More recently, however, and especially during the present epidemic (1838), I have looked for them carefully in many instances that have proved fatal in the Middlesex Hospital, and have discovered neither ulceration, nor any other apparent change in the follicles of the intestines".[1] As additional proof that typhoid and typhus fevers are simply varieties of the same essential disease, of which the *typhoid* form prevails chiefly on the continent and in America, and *typhus* chiefly, though by no means exclusively, in England, it has been observed that on the examination of those who have died of ship-fever, which is an adynamic petechial typhus, the follicular lesion is generally absent, *and yet exceptional cases of its presence now and then occur*. On the other hand, Dr. William Jenner himself admits, that, occasionally, though very rarely, in typhoid fever with the rose rash, the follicular lesion is wanting. Again, M. De Claubry has proved, in a prize essay on the *Identity of Typhus and Typhoid Fever*, to the satisfaction of MM. Chomel and Louis themselves, that the typhoid fever of M. Louis is the same as the typhus of armies, and equally contagious.[2]

Professor Rokitansky, of Vienna, has developed a still more novel view of the nature of the typhoid affection, or "typhus", as he calls it. His view is that it is a true dyscrasy, or cachexia, and that the pathological process is characterised by the deposition of a peculiar morbid product, which forthwith undergoes a distinct series of morbid changes. "The seat of this process is various, and depends upon the specific relation of the poison of typhus to certain organs. The tissues most subject to this deposition are *the mucous membranes, especially the space between the mucous and the muscular coat, and the mesenteric glands;* and in Austria, at least, where the observations were made, *the mucous membrane of the ileum* is most frequently affected; but it occurs also *in the bronchia and lungs*, and, although very rarely, *in the colon*. This typhus deposit, according to M. Vogel, usually appears as a more or less firm lardaceous mass, of a yellowish or whitish colour, which is deposited in greater or less abundance amongst the normal tissues, gradually softens, and, as the normal elements of the region become also involved in the process, forms ulcers, which either heal by cicatrization, or continue until the death of the patient. In many cases, however, death takes place before the commencement of the softening. The typhous matter, under the microscope, appears to consist of three elements; an amorphous semi-transparent stroma, very minute molecular granules, and larger corpuscles, which seem to be imperfect cells and cytoblasts. Histologically it cannot be distinguished from

[1] Watson's Lectures on the Practice of Physic, vol. ii, p. 689.
[2] Dunglison. Practice of Medicine, vol. ii, p. 493.

the deposits, that occur in scrophulosis and tuberculosis."[1] The local importance of this deposit cannot be questioned, as many cases terminate fatally from its effects,—ulceration, perforation of the intestine, etc.

CONDITION OF THE BRAIN IN FEVER. The microscope holds out to us a prospect of settling the much disputed point, whether or not the brain often suffers from inflammatory lesions in fever? The eye is, perhaps, competent to decide on the evidences of inflammation in the membranes; but it often fails in deciding the question, as it concerns the substance of the brain. For it is not always easy, even to careful observers, to distinguish between the hyperæmic condition which is the result of inflammation, and that which may be termed *cadaveric*. The conclusions of Dr. Hughes Bennett, as to the results of simple inflammation of the brain, from careful observation by the microscope, seem, in many points, applicable to the case of inflamed cerebrum in fever. They are as follow:—

1. "That two kinds of cerebral and spinal softening exist, an inflammatory and a non-inflammatory, which may always be distinguished from each other by the microscope.

2. "That inflammatory softening is characterised by the presence of exudation corpuscles and granules, whilst in non-inflammatory softening these bodies are never found.

3. "That the nature of inflammatory softening consists in the formation and development of nucleated cells in exuded blood-plasma; whilst the nature of non-inflammatory softening consists in the mechanical destruction or maceration of the nervous tissue in serum, or is the result of putrefaction.

4. "That non-inflammatory softening, unaccompanied by hæmorhage, is usually *post-mortem*, and causes no symptoms; whilst uncomplicated inflammatory softening always causes marked symptoms, which, however, vary according to the seat of the lesion.

5. "That the inflammatory and non-inflammatory softenings have frequently been confounded together by morbid anatomists, it being impossible to distinguish one from the other with any certainty by the naked eye.

6. "That inflammation in the nervous centres has, in several instances, been demonstrated by means of the microscope, after it has escaped the search of good morbid anatomists, and been indicated by most unequivocal symptoms.

7. "That every different coloured softening has, at various times, been found to be connected with inflammation; but that yellow and white softenings are most frequently non-inflammatory, whilst the fawn-coloured softening is non-inflammatory.

8. "That red softenings usually depend on congestion, or the direct extravasation of blood; yellow softenings on the imbibition of the colouring matter of the blood; fawn and grey-coloured softenings on the presence of grey exudation corpuscles; and white softenings, in the great majority of cases, are *post-mortem*, and the result of maceration in the serum."[2]

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[1] DUNGLISON. Practice of Medicine, vol. ii, p. 494.

[2] SOLLY on the Structure, Physiology, and Diseases of the Human Brain. Second Edition, p. 386; quoted from *Edinburgh Med. and Surg. Journ.*, vol. lx, p. 398.

Perhaps no subject has more puzzled medical observers than the true condition of the brain and nervous centres in continued fevers; and in no case has speculative error produced more extensive practical mischief. Genuine encephalitis may be mistaken for continued fever with intercurrent inflammation of the brain; and continued fever so complicated may be treated for pure encephalitis, with its symptomatic febrile excitement. Close observation and an acute judgment are required for discriminating those cases of fever in which such inflammation occurs, and for directing the appropriate treatment. Moreover, during the present prevailing constitution of the seasons, we often witness a condition of the brain in fever, which merely simulates inflammatory congestion, and depends either on the want of a normal *vis a tergo* in the circulation, or on an impaired function of nutrition favouring a species of *ramollissement* of the tissues. This kind of softening is not owing to the effused serosity from distension of the capillaries, but is always in proportion to the fluidity of the blood, and the tendency of that fluid to run into putrefaction. "There is a modification of nutrition", says Dr. Carswell, "which is accompanied by softening of *all* the tissues (those of the brain of course included), and which seems to depend on a morbid condition of the blood. Such is the case in the worst forms of typhoid fevers, small-pox, scarlatina, measles, etc., and when certain poisons have been introduced into the circulation."[1]

The inquiry, therefore, *what is the condition of the brain in fever?* is fraught with the deepest interest. Dr. Copland states a great and golden truth, when he says: "*Predominant cerebral affection* less frequently amounts to actual disease, or passes into disorganization, in fevers, than has been very generally supposed; the disorder most commonly existing in this quarter, *in low fevers especially*, being more functional than structural; depending more upon the state of organic nervous influence in the organ, than upon inflammatory or other lesions. The effusions and congestions observed in fatal cases, are probably in great measure *post-mortem* changes; and, even granting their existence during life, they are often insufficient to account for the symptoms referable to this part."[2] I propose first, to confirm this great truth by a reference to the best authorities; and secondly, to guard the doctrine from abuse, by pointing out those deviations from a general rule, which have ever and anon occurred to the most trustworthy observers.

I. CEREBRAL AFFECTION IN FEVERS IS MORE COMMONLY FUNCTIONAL THAN STRUCTURAL.

M. Louis does not seem inclined to believe that either the general softness or hardness of the substance of the brain, occasionally observed in fever, ought to be considered as the results of inflammation, because the symptoms during life do not bear an appreciable relation to these appearances. He also affirms, that having examined with much attention the cerebral membranes in more than five hundred cases, he has in no instance seen adhesions between the arachnoid and pia mater, either at the surface or in the ventricles of the brain. Moreover, his exceptional cases to perfect integrity of cerebral structure, though in-

[1] Carswell. Pathological Anatomy. Article, "Softening." Dictionary of Practical Medicine, p. 920.

dicating an occasional approximation to inflammation, are, for the most part, much too slight to warrant Dr. Clutterbuck's theory, that fever results from inflammation of the substance of the brain. Thus he states, that, "besides a case in which the inside of the dura mater presented a thin pseudo-membrane, in *four* there was a little fluid between the dura mater and arachnoid; in *more than one half* the sub-arachnoid cellular tissue was infiltrated with serosity, and in *one half* the pia mater was injected with blood. In *three-sevenths* the cortical substance was redder than natural; in *six-sevenths* the medullary matter was injected, these latter appearances being most striking when death took place at an early stage; in *six* cases the density of the brain was slightly increased; in *five* it was diminished."[1] Andral, in like manner affirms, that no truth is better demonstrated in medicine than that every nervous derangement may exist in fever, and yet no appreciable alteration of the brain or its membranes be found after death. "In a great number of cases", he says, "the substance, so far from being injected, appeared remarkably pale, and this paleness frequently coincided with an equal want of colour in the membrane." Chomel's observations are strongly corroborative of those of Louis and Andral. He gives the following statement in respect to thirty-eight fatal cases, in which the brain was carefully and minutely inspected by him. "In fifteen out of the thirty-eight, no morbid appearance at all was perceptible: in twelve there was some serous fluid, from a tea-spoonful to a table-spoonful, in the ventricles: in seven there was what he calls *œdema of the meninges*, effusion, that is, in the meshes of the pia mater: in six, general but slight diminution of consistence: in two, some alteration of density: and in five, a speckled appearance of the cerebral substance."[2] Dr. Watson's testimony is confirmatory of the same general view. "Not only", says he, "do we fail to discover, in many instances, any traces of inflammation, upon inspecting the dead brain, but we find that, during the life of the patient, measures which would be likely to aggravate any inflammatory mischief—strong stimulants for example, wine or brandy—do actually and obviously, in cases innumerable, relieve the comatose symptoms, and benefit the patient. The inference seems unavoidable, that the coma, in such cases, has some other cause than the mechanical pressure which arises sometimes from the effusion of fluid upon the surface of the brain, or within its ventricles; and that other cause is supplied by *the poisoned blood*."[3]

We have the light of analogy thrown on this view of the subject by what occurs in scarlet fever in its malignant forms. Hence Dr. Graves, in describing the forms of scarlatina, sensibly remarks:—"In this form of the disease, where the pulse, without becoming strong, *at once became extremely rapid*, bore venesection badly, and required great caution even in the application of leeches; the nervous symptoms only appeared accelerated by the system of depletion, although the heat of the skin suggested its employment. The derangement of the brain and nerves in this form depended on something more than the violence of the circulation, and originated in something altogether different from mere cerebral inflammation or congestion. What that something was

[1] Cyclopædia of Practical Medicine, vol. ii, p. 178.
[2] As quoted by Dr. Watson in his Lectures, vol. ii, p. 683.
[3] WATSON. Lectures on the Principles and Practice of Medicine, vol. ii, p. 683.

I cannot even conjecture; but it was probably the result of *an intense poisoning of the system by the animal miasma of the scarlet fever.*"[1] Cholera, in its worst forms, seems to point to a similar explanation of sudden collapse and death. And we may fairly conjecture, that *some* of those sudden deaths in fever, which occasionally take us by surprise, may be thus accounted for. Dr. Alison's remarks on *post-mortem* appearances within the cranium after idiopathic fever, go very much to the same point as those of the authorities already quoted. He tells us that they are confined, in by far the greater number of cases, to increase of the natural serous exhalation on the different surfaces, particularly in the ventricles and beneath the arachnoid coat, that it very seldom amounts to an ounce, and that it is very generally much less than in fatal cases of idiopathic inflammation within the cranium, whether acute or chronic. He makes equally light of the turgescence of the blood-vessels, and thinks that even depositions of lymph are often due to previous disease rather than to fever.[2]

II. FEVER IS SOMETIMES ASSOCIATED WITH CEREBRAL INFLAMMATION.

Having thus adduced the authority of a few of the highest names in French and English medicine as to the fact of the general absence, in fever, of unequivocal traces of cerebral inflammation, it becomes my duty equally to guard that doctrine against the misconception *that fever is never associated with cerebral inflammation.* I shall, therefore, marshal a sufficient amount of evidence, on the other side, to qualify the too sweeping conclusion which might be drawn from a *primâ facie* view of the subject. And it will at once appear, that not only do stray cases of cerebral inflammation occasionally break the uniformity of a non-inflammatory series; but also that epidemics are wont, in certain seasons, to arise with types of sthenic action, and with a decided bias to cerebral lesions.

a. Stray Cases of Cerebral Inflammation occur in Fever. Dr. Mackintosh has left on record some particulars of an epidemic fever in Edinburgh in 1827. The disease was mild, especially in the beginning; for, out of the first hundred and forty cases, there was only one death. Afterwards the deaths were in the proportion of one in thirty-seven. Amongst other results of the disease, as exhibited in various organs by dissection, he tells us that "in two cases, there was well-marked arachnitis, namely, by extensive effusion of coagulable lymph, which was deposited between the arachnoid and dura mater. In both there was great vascular turgescence; some effusion into the ventricles; and in one of these there was white ramollissement in the centre of the brain".[3] Dr. Duncan Junr.'s *Clinical Reports* for 1818, in like manner furnish us, from the pen of Dr. Craigie, with two dissections of cases of fever with cerebral lesion, in one of which there was effusion in the left lateral ventricle to the amount of from one to two ounces of transparent colourless fluid, with the rest of the organs sound; and in the other there was a similar effusion, but its amount is not specified.[4] Dr. Roupell, in his *Treatise on Typhus Fever,* mentions a

[1] GRAVES. System of Clinical Medicine, p. 506.
[2] ALISON. Pathology and Practice of Medicine, pp. 408, 409.
[3] MACKINTOSH. Practice of Physic, vol. i, p. 172.
[4] DUNCAN'S Edinburgh Clinical Reports, pp. 103-4.

case of effusion into the head, indicated by opening of the sutures. The youth, aegd. 19, recovered, and the sutures closed. In another, "lymph and serum were copiously effused into the ventricles, and a layer of lymph, fully a line in thickness, was found on the surface of the hemispheres. The other viscera were healthy." In another "there was great vascularity of the pia mater, especially at the base of the brain. The arachnoid membrane was slightly opaque, and there was a bloody fluid effused into the theca of the spine". And, in another, "the ventricles of the brain contained serous effusion; and a large quantity of bloody fluid filled the spinal sheath".[1] In one of Andral's cases of fever, with ataxic symptoms, and alternations of delirium with perfect intelligence, accompanied with hydrophobia and convulsions, "the cerebral sinuses were filled with blood, the cerebral substance of ordinary consistence, marked with a considerable quantity of red points, and about a spoonful of limpid serum in each lateral ventricle".[2]

b. Epidemics occasionally arise with a decided bias to Cerebral Inflammation. In the Bristol epidemic of 1820, as reported by Dr. Pritchard, he refers to cases of cephalic fever, and says that, when the symptoms of severe disease were not subdued by active treatment, "it was almost uniformly proved by examination after death, that the brain had suffered irreparable injury."[3] In the London epidemic reported by Dr. Tweedie, it would also seem that head-affections were predominant. For he tells us, that "of 54 cases examined at the London Fever Hospital, 37 exhibited evident traces of previous inflammation of the brain."[4] Dr. Cheyne's report of the Hardwick Fever Hospital in 1816-17, presents us with seven examples of cerebral lesion of the most decisive character:—for in one there were six ounces of fluid in the ventricles of the brain; in a second, five ounces of fluid in the ventricles; in a third, the minute vessels of the cortical substance of the brain were turgid, imparting to it a very red colour; in a fourth, the tunica arachnoidea was much thickened, with effusion betwixt it and the pia mater, and several ounces of fluid in the ventricles; in a fifth, the vessels of the brain were turgid, and there was one ounce of fluid in the ventricles; in a sixth, there was serous effusion under the arachnoid membrane, vascularity of the pia mater considerably increased, brain firm, a little fluid in the ventricles, and the velum interpositum thickened; and in the seventh, there was increased vascularity of the pia mater, with several red points on its surface; the texture of the brain very firm, and about ʒiij of serum in the ventricles.[5] Dr. Cheyne's report of the same Fever Hospital for 1817-18, yields ten examples of cerebral lesion equally decisive. I need not specify all: but in one the pia mater was highly inflamed, and the ventricle contained between three and four ounces of fluid. In another there was a layer of effused blood in different situations under the pia mater of both hemispheres. In another the same extravasation of blood was seen, and the arachnoid membrane between the convolutions of the brain was much thickened and opaque, and contained under it a gelatinous substance. In an-

[1] Roupell on Typhus Fever, pp. 107-8-9-10.
[2] Andral's Clinique Médicale, vol. ii, p. 635.
[3] Pritchard's History of Bristol Epidemic, p. 67.
[4] Cyclopædia of Practical Medicine, vol. ii, p. 178.
[5] Dublin Hospital Reports, vol. i, pp. 68, 74, 75, 79, 80, 85, 107, 111, 114.

other the membranes were thicker, firmer, and more opaque than natural, and a small quantity of blood was effused into the ventricles, the sides of which were very vascular. In another, along with signs of vascular engorgement of the membranes as well as substance of the brain, the ventricles were filled with serum. But I will not multiply details.[1] These statements by Dr. Cheyne are followed by a tabular view of the dissections in the latter of these epidemic fevers, from the pen of Mr. Crawford, from which it appears, that while there were only twenty-three examples of serious lesions in the abdomen, and twenty-two in the chest, there were thirty-seven in the head.[2] In many of the last, too, it is particularly noticed that all the other organs were free from lesion. It is impossible to compare these dissections with those reported by Andral without being struck with the fact, that cerebral lesions were, in the great French pathologist's experience, infinitely rarer and much less severe than those in Dr. Cheyne's, while the former records far more numerous and formidable abdominal lesions. It is most evident, therefore, that epidemics vary much as to the predominance of the lesion of one set of organs over that of another.

My next and final proof of this fact will be found in the description of the fever which prevailed in Scotland in 1843. Dr. Cormack[3] has minutely described the disease as it prevailed in Edinburgh; and Dr. J. Arrott[4] has given a short but good account of it as it occurred in Dundee. The same epidemic has also been described by Dr. Alison, Dr. Wardell, and others. Black vomiting was common, and the bile was generally very viscid. The appearances after death corresponded remarkably with those observed by the French Commission in the yellow fever of Gibraltar in 1828, particularly as regarded the condition of the liver, which M. Louis considers to be the anatomical character of yellow fever. Dr. Cormack has given a complete account of the Natural History and Pathology of the Edinburgh epidemic, and has elaborately compared it with other fevers.

Bearing in mind these exceptional inflammatory lesions of the brain, let us revert to the result of the voluminous post-mortem researches of the French pathologists,—namely, that in typhoid fever, *with the rose-coloured rash on the skin and the follicular exanthem in the bowels*, actual cerebral lesion is a most rare occurrence. Although we may have the most marked head-symptoms, our minds may in such cases be very much at ease respecting the state of the brain, and our efforts may be employed otherwise than in the worse than utopian effort to quell a simulated arachnitis. For it has been laid down as a principle, that "in this disease there is not a nervous symptom which may not manifest itself without any appreciable alteration in the brain and its dependencies; and that when anatomical lesions of the nervous centres are met with, they are so slight and inconstant as not to permit any rational consequence to be deduced from them." Andral's remark on this subject is extremely important and instructive. "May

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[1] Dublin Hospital Reports, vol. ii, pp. 83, 89, 90, 91, 97, 101, 103, 107.

[2] Ibid., vol. ii, pp. 110 to 127.

[3] Cormack, Dr. John R., on the Fever of 1843. Edinburgh: 1843.

[4] Arrott, Dr. J. Edinburgh Monthly Journal for 1844, p. 256; from *Scottish and North of England Medical Gazette.*

we refer", says he, " the nervous disturbances in bad fevers to the state of the small intestine, and particularly to dothinenterite? Certainly we may in a great number of cases, but not in all. In several of these cases, where, in order to account for the very severe symptoms, nothing is found but some follicular patches swollen or slightly ulcerated, there is some ground for hesitating to refer such great disturbance to such slight lesions; there is reason for thinking that behind these visible lesions, and before their appearance, there existed in the previous state of the patient some serious derangement, without which such alarming symptoms would not have been produced. No; the intestinal affection is not the entire cause in all such cases; and in order to account for every thing which coincides with it, or appears after it, it becomes necessary to introduce other elements, which pathological anatomy has not yet discovered by means of the scalpel. Here then, as in numberless other cases, that which we perceive is but a part of that which exists." He then refers first to those cases, in which the same nervous symptoms existed with *lesions of other organs*, but without any intestinal lesion appreciable by anatomy; and secondly to those uncommon, but yet real cases, in which, *in the absence of any organic lesion appreciable after death*, the same nervous symptoms were still present.[1]

Andral goes on to insist, that " these fevers never become severe except in consequence of a disturbance, which supervenes in the innervation and hematosis." Bouillaud and Chaufford confirm this view, " by establishing the reality of the alterations, which, on the one hand the blood, and on the other hand the nervous centres, undergo in a great number of fevers." It would seem, alike from the observations of Andral, Raciborski, and Simon, that the quantity of fibrin in the blood is certainly decreased, except on the supervention of inflammatory symptoms, when it increases. This diminution of fibrin Andral ascribes to a true poisoning of the blood. The corpuscles, as repeatedly examined by M. Donné under the microscope, did not, in the most marked forms of fever, exhibit any difference from those of healthy blood, although on the average less in amount. It also appears, that a decided decrease of the urea below the healthy average is a characteristic of the urine in typhus. Andral further shews, that " other organs also, though less frequently than the digestive tube, may become the occasion of this profound disturbance of innervation and hematosis"; and he instances phlebitis, pneumonia, erysipelas, variola, synovitis, and other diseases, as often producing it. He further refers to the poisoning of the blood by miasms, virus, and matters in a state of putrefaction, as a fruitful source of the disturbances and lesions in fever. The truth seems to be, that though various poisonous matters introduced into the circulation may depress the system, and predispose it for the full effect of a more specific poison, yet, except in those simulations of typhus fever supervening on other diseases, the miasm of typhus or typhoid fever is a *sine quâ non* to the production of these fevers. Assuming this fact, then, after the period of its latency in the blood has passed, the *primary* operation of the specific poison is on the great nervous centres, and on the organs and systems dependent on them, and this consti-

[1] Andral's Clinique Médicale, translated by Dr. Spillan, vol. ii, p. 628.

tutes the febrile explosion. But its *secondary* operation, after an indefinite period, is on certain organs or tissues, in which are produced local lesions or alterations of structure. The mucous membrane of some portion of the digestive tube, or Peyer's glands, is the most common seat of such injury; next, but far less frequently, the brain or its membranes; and, perhaps still less frequently, the parenchyma or bronchial membrane of the lungs. Such is the ordinary course of the malady; although it also appears probable from Andral's observation quoted above, that adynamic or ataxic febrile phenomena, simulating typhus, may also stand in the relation of effect to various other organic lesions and constitutional maladies. The law that fever precedes *the secondary specific lesions* from the morbid poison of typhus or typhoid fever is consonant with the laws of other morbid poisons, as those of small-pox, scarlet-fever, intermittent fever, etc.[1] Chomel had an opportunity of examining a patient, who died on the seventh day of typhoid fever, and he found even then the follicles of the mucous membrane of the intestinal tube enlarged.

Practical Remarks. Coupling the knowledge we have acquired from the French pathologists, respecting the prevalence of follicular lesion of the small intestines in typhoid fever on the continent, with what we know of its occasional occurrence in England, we shall be prepared for a rigid analysis of the cerebral symptoms in each case, with a view to ascertain whether these are the sympathetic consequences of enteric irritation, or the result of positive organic disease of the nervous centres. Nor must we lose sight of the fact, that febrile irritation has often the power to develope constitutional peculiarities of the nervous system, independently of any ascertained local organic lesion. Andral has recorded several cases of this kind. Thus in one, in which "no organic lesion was detected in any part of the body", there had been febrile delirium, and "from time to time the face and extremities were agitated by convulsive movements". On this case Andral pointedly remarks: "Can it be said that the disease existed nowhere, or, if some will have it so, that it existed everywhere? We shall not reason so; we shall place the seat of the evil where the symptoms pointed it out, namely, *in the brain:* but this fact is to be added to several others, which prove the insufficiency of our present means of investigation to discover, in the dead brain, the traces of the disease seated in it."[2] In another case, in which, towards the close of the disease, there supervened symptoms of tetanus, but in which the scalpel traced marks of enteric disease chiefly, Andral's remark is the following:—"If the tetanus was, in this individual, the result of irritation, transmitted sympathetically from the stomach to the spinal cord, there must be admitted to exist in this person a special predisposition, in virtue of which tetanus would have equally declared itself, no matter what organ had become the seat of irritation". Another form of cerebral irritation, which, however much it

[1] These *secondary specific lesions* are to be distinguished from those produced by *epidemic influence*, an influence which, as Dr. C. W. Bell justly remarks, gives to fevers "a pseudo-specific character, by superimposing upon them the peculiar derangement of function, which it is its province to produce." *Trans. of Prov. Med. Assoc.*, vol. xvii, p. 28.

[2] Andral's Clinique Médicale, translated by Dr. Spillan, vol. ii, p. 701.

may simulate phrenitis, implies a condition of the brain altogether removed from that of inflammation, is the result of depressing mental causes. A case of this kind occurs to my recollection, which was a most instructive example of the depressing power of intense mental agony, want of sleep, exhaustion from fatigue both of body and mind, and frequent fasting and irregularities in diet. Delirium, with fever, set in very early, and with it very soon the mulberry rash and petechiæ of malignant typhus. I had not shed a drop of blood by leech, or by lancet, and the antiphlogistic plan was soon exchanged for wine and stimulants; but collapse and death rapidly ensued. If again we find profound disturbance of the innervation combined with the rose-coloured rash, or, in its absence, with local tenderness on pressure over the ileum, our attention will be withdrawn from too exclusive an examination of the brain to the more pressing claims of the abdominal mischief for prompt remedial measures.

We have further to study the prevailing character of epidemic diseases, both as it regards their evident bias to affect one class of organs rather than another, and also as they may assume a low and typhoid, or a high-toned and inflammatory bearing. We must recollect also, that even the same epidemic will undergo a change in its character from the modifying influence of the seasons. "This, however, I am certain of", said the illustrious Sydenham, "from numerous careful observations, that the same method which cures in the middle of the year may possibly prove destructive at the conclusion of it". This observation I have myself verified at St. Bartholomew's Hospital. I have seen cases, with a small and depressed pulse, demanding wine to sustain the heart, and simultaneous local cuppings to free an engorged lung, at one period of the year; and other cases in the same epidemic at another season, requiring the withdrawal of the wine, and even the cautious use of the lancet, owing to their assumption of the inflammatory type, with a sharp and resisting pulse. And here I may be allowed to state my decided conviction, that a great change has lately, and especially during the choleraic constitution of the atmosphere, come over the nature of fever, and, in a less degree, over inflammatory diseases in general. This is no new thing. Fifty years ago puerperal fever, according to the united testimony of all the best writers of that period, would not bear bleeding or active purgation. Then followed a change in the seasons, which, according to the experience of Dr. Gordon of Aberdeen, Mr. Hey of Leeds, Dr. Armstrong of Sunderland, Dr. Campbell of Edinburgh, and others, demanded the most heroic depletory measures. I myself witnessed, and put on record, two epidemic maladies, typhus[1] and scarlet fever;[2] the former in 1819, and the latter in 1832; both of which required active depletion, both general and local. Since that period we have witnessed the recurrence of a depressing constitution of the atmosphere, which absolutely forbids all active lowering measures. On the contrary, so weakened are the vital powers, more especially in fever, that if we use the lancet we almost certainly destroy the patient; while leeches themselves sometimes render recovery difficult, or impossible. In short, a conservative treatment, consisting of the judicious combination of quinine, cordial

[1] History of the Bridlington Epidemic Fever in 1818 and 1819.
[2] Edinburgh Med. and Surg. Journal, October 1, 1833.

diaphoretics, diluted wines, and good broths, commenced very early in the course of the disease, promises more success than any other, and seems to sustain the function of nutrition, as well as to obviate those local congestions of the brain, and other organs, which appear to steal on our patients, from the loss of the *vis a tergo* in the heart and arteries. Sydenham, also, bids us attend to the type of contemporary diseases; adding, that the character of a fever "may often be sufficiently known by carefully attending to other diseases". Nor need I remind my readers how much, in ordinary seasons at least, a man's condition, situation, and circumstances, will often modify the complexion of a fever. "A well-fed, and previously healthy soldier, who has no cares, will in general have a high-toned fever; whereas a poor, ill-fed, and badly-clothed, labouring man, worn out by cares and anxieties, and living in an ill-ventilated and filthy apartment, will be affected with one of an opposite character."

In other adynamic and malignant forms of fever, we can undertand with Dr. Watson how the stupor is occasioned by the poisoned blood, and not by effusion in the brain, and we cannot, therefore, hesitate, in such cases, to administer cordials. In these adynamic forms of fever, Dr. Copland strongly recommends the chlorate of potassa; and Dr. Watson prescribes a solution of it in water, in the proportion of a drachm to a pint, as a drink. He states, that under the use of a pint, or a pint and a half of this solution daily, he has noticed, in many instances, a speedy improvement of the tongue; which, from being furred or brown and dry, has become cleaner or moist. At the same time, bearing in mind the depressing influences, with which our patients have to struggle, we give stimulants at the proper time, and with a bold hand. The knowledge, again, that the fibrin of the blood is diminished in typhus fever, and that the blood is doubly poisoned by an excess of urea, in addition to the specific miasm, will confirm us in the necessity of sustaining the vital powers, and of avoiding, as much as possible, all lowering agencies. Now and then, indeed, we meet with cases, in which life is so completely overwhelmed by the depressing miasm, as to hold all our efforts at defiance. For sporadic cases occasionally arise, of so unusually malignant a character as to defy all the resources of medicine. Thus, a few years ago, I was called to a family in Holderness, plunged into great distress from the sudden invasion of the farmer and his wife by what seemed to be a typhus poison; which proved fatal to them both within two days. The wife first fell ill, and was moribund when I saw her, with both her lower extremities cold and livid as high as the knees. Her husband had then, also, been seized a few hours, and was almost pulseless, with petechiæ in various parts of the body, insatiable thirst, parched tongue, and other febrile phenomena. There were neither the symptoms of cholera, nor those of poisoning, nor could they be traced to deleterious vegetable or animal food. Every attempt to sustain the sinking powers, in both these cases, proved wholly nugatory.

Instructed, however, by another class of important facts, we shall not blindly take for granted the absence of cerebral engorgement or arachnitis; but, admonished by the proved occurrence both of stray cases of cerebral lesion in epidemics characterized mainly by disturbance in other organs, as well as by the occasional predominance of brain affection in certain epidemics, we shall be on the look out for the possible

occurrence of such lesion, and give every case of equivocal aspect the benefit of a most rigid analysis from time to time. M. Rostan's conjecture too is worth considering, who suggests the possibility that inflammation of the brain and its envelopes may be induced by a special cause, as by animal matters in a state of putrefaction. We must note the tone and character both of the epidemic we have to deal with, and of contemporary diseases. We must bear in mind the importance of an early and anticipatory treatment, should cerebral lesion be actually pending. It is remarked by Dr. Graves, in reference to a case of intensely violent maculated fever, which, on account of head symptoms, had been leeched early, and the whole scalp blistered on the *fifth* day, and blistered again as well as the nape on the *eighth* day, that "*on the ninth day* the cerebral symptoms, *which we had been endeavouring to anticipate,* came on, but probably our treatment prevented them from being fatal; for when they appeared, the application of tartar emetic ointment induced a purulent discharge from the whole surface of the twice-blistered scalp, in the course of a few hours, and three grains of tartar emetic, given in divided doses that day, procured a complete cessation of the symptoms, after"—mark, after—"*the pupils had been dilated, and one fit of slight paralysis of the mouth and tongue had taken place.*"[1] It would be foreign to my purpose, and superfluous, to sketch all the symptoms of menaced cerebral lesion; I may notice, however, one on which Dr. Graves lays great stress. "On the morning of the eighth day", he says, in reference to a certain case, "we observed that every now and then he *respired irregularly,* as if repeatedly and gently sighing,—a variety of respiration often indicating a disturbance of the nervous system, and which I have repeatedly observed as a precursor of cerebral excitement, and to which, consequently, I have been in the habit of drawing the attention of my pupils, under the name of *cerebral respiration.*"[2] A most interesting case of the sudden supervention of the cerebral inflammation occurred to my observation in the Infirmary about three years ago, in the person of a sailor, who had gone on favourably up to that time. I had not seen him on the day when he was attacked with head symptoms. I was told, when I visited him the following morning, that on the day before, towards evening, he had become suddenly maniacal, and I found him manacled and strapped down to the bed. He had a sharp, rapid, and resisting pulse, a flushed countenance, a flashing eye with contracted pupil,—all the symptoms, in short, of arachnitis. I immediately took from his arm twelve ounces of blood, which was sizy, and put him under the full influence of tartar emetic. The bad symptoms were at once arrested, and he was convalescent in a few days. But the real difficulty lies, after all, in discriminating between the symptoms of merely sympathetic and actually organic disturbance of the innervation. No one can rise from the perusal of Andral, without a deeper impression on his mind of this important practical truth.

Postscript. Since the above remarks were written, the following interesting case of fever has occurred in my own family; and though not of a typhoid, but of a *remittent* type, its affinities to the subject of the previous inquiry are sufficiently obvious to warrant its insertion

[1] Graves. Clinical Medicine, p. 100. [2] Ibid. p. 88.

here. The case was so severe as fairly to justify the epithet of *malignant* remittent fever.

Case. Henry Sandwith, æt. 23, well-built and muscular, but having an irritable brain from night-work in study at an early age, in a large public school, has lately been again working hard, and encroaching upon the hours of sleep, in preparing for his degree at Cambridge. He has suffered from great and depressing anxiety on the subject.

Dec. 5, 1850. The attack of fever commenced to-day with constant shivering and aching in the joints. He took two grains of calomel and a black draught on his own responsibility. Unfortunately he had a small wine-party at his rooms this evening, but drank only two glasses of wine. The excitement of the evening was followed by a most restless night, crowded with strange and multitudinous dreams.

Dec. 6. He was still worse, and unable to look at a book. Diaphoretic medicines were given him, but they failed to act on the skin; the pulse that evening rose as high as 130.

Every night, from Dec. 5th to the 9th, his sleep was disturbed, unrefreshing, and filled with dreams. There was loss of appetite, with a white and parched tongue. He took a small basin of mutton broth each day.

Dec. 9. Wrote home, that he was a good deal prostrated, and could not read or do anything, but lay wrapped up on the sofa. The shiverings had much declined, but fever continued. Tea and toast turned the stomach immediately; broth alone remained. The tongue, to his own sense, was as parched and the taste as metallic as possible. He had felt unequal to write home on the 8th, though deeply sensible he ought to do so.

Dec. 10. Returned home to Hull by railway from Cambridge, a distance of 160 miles. He almost fainted on his journey. A fellow-passenger gave him a little brandy; he also ate an orange. That night he was restless, feverish, and his bowels were a little disturbed.

Dec. 11. Complained of a slight pain on the left side of the abdomen, near the sigmoid flexure of the colon, which was not, however, increased on pressure. The abdomen generally was soft, and gave no indication of pain on pressure anywhere. There was no distension.

Dec. 12. Had hæmorrhage from the bowels to the amount of about ten ounces at 2 o'clock P.M. He had been purged thrice in the night, the products of which an ill-informed nurse had removed. There is reason to fear that blood had been evacuated. A large blister was applied over the abdomen; and half-drachm doses of spirits of turpentine and castor oil were promptly given every third hour. There was hæmorrhage twice more, but not to any amount, not more than three or four ounces in all. This was succeeded by several copious, watery, pale-yellow stools, with tenesmus. The simple aromatic chalk julep, to the extent of thirty grains, with a grain of opium and Venice soap, as a suppository, quieted the commotion. That evening his pulse dropped considerably, the skin for the first time gave way, and he had free perspiration, and slept well the whole night.

Dec. 13. Tongue still furred and white, though breaking up a little; thirst extreme; all the symptoms in short marking great erethism in the gastro-intestinal mucous membrane. There was now a marked exacerbation of fever twice daily, with slight chilliness, suc-

ceeding fever, and eventual perspiration. Towards evening this day he got out of bed under feverish excitement, though he was not maniacal. He left his bed under an impression that he should die the next day, and wished once more to walk across the room. He passed a sleepless night, with great heat and thirst, and laboured under deep and settled melancholy.

Dec. 15. There was hæmorrhage from the bowels at 4 o'clock A.M. to upwards of a pint; and again at 11 A.M. to nearly the same amount. Great faintness came on after the first loss, requiring a little brandy and sal volatile in water. We immediately gave him three grains of acetate of lead with one-sixth of a grain of opium, followed by three grains more of the lead an hour afterwards, and then successively two-grain doses every second hour, until a scruple had been taken. The intervals were then prolonged to four hours during the consumption of ten grains more, making in all thirty grains, when, as all hæmorrhage had ceased, the medicine was suspended. After each of the hæmorrhages, we also threw up the most powerful astringent injections. Sixteen grains of pure tannin dissolved in twelve ounces of warm water, were administered as a cold enema twice; then a solution of matico; and lastly two injections with a drachm of tincture of sesquichloride of iron in ten ounces of water. By these measures in combination the hæmorrhage was happily arrested.

To meet the tendency to collapse, a table-spoonful of old port wine in gruel, alternated with beef tea, every hour and a half, was steadily administered, also a little hock and water to quench the thirst. Two grains of sulphate of quinine, with five minims of elixir of vitriol, dissolved in water, and a drachm of Huxham's tincture of bark, every fourth hour, were substituted for the acetate of lead.

Dec. 18. There having been no evacuation of any kind since the 15th, the bowels were relieved by two-drachm doses of castor-oil and half a drachm of spirit of turpentine once in six hours, until it answered. During this and the following day seven pitchy melæna stools were passed.

Dec. 21. After a day's inaction of the bowels, a tea-spoonful of castor-oil was given, and bilious evacuations followed.

Dec. 23 *and* 25. The bowels were relieved by the same small dose of castor-oil, and healthy stools procured. Symptoms of indigestion arose on the 24th, and were yet worse on the 25th, owing perhaps to a rather too generous diet.

The pulse ranged between 100 and 120 (rising even to 130) during the first seven days. But it fell considerably after the first hæmorrhage, and was down at about 90 after the large loss of blood. The tongue also rapidly cleaned, and the thirst gradually subsided. The stomach maintained itself remarkably well until about the 24th. The urine was unusually dark-coloured throughout the whole course of the fever.

From the period of the first hæmorrhage, the patient was seized with the predominant idea of impending death. This feeling was unusually strong on the day preceding the larger hæmorrhages, namely, on Dec. 14th. Yet up to the period of his convalescence, he was not aware that he had ever passed blood by stool. But it should be here mentioned, that on Dec. 15th, slight epistaxis took place, and that he expectorated sputa streaked with blood several times and for several

days. By using red pocket-handkerchiefs, he was kept in ignorance of this fact also. There was bronchial cough for many days.

The patient complained several times of pain about the region of the liver, but having its seat probably in the ascending colon. This was relieved by sinapisms and ammoniated liniment.

There was much throbbing of the head throughout the whole period of the disease. This symptom was much relieved, and sleep induced, by cold spirituous lotions to the forehead.

The value of the acetate of lead was shewn in the sanguineous exudation as clearly as Dr. Graves has proved its power in the diarrhœa of Asiatic cholera.

Remarks. This case is one of much interest; not merely from its severity and the patient's recovery from extreme peril to life, but also as shewing the influence of moral and physical causes on life and organisation. It is matter of observation, that lesion of Peyer's glands is not confined to typhoid fevers, but has been found also in *remittent* fever, sometimes in conjunction with lesion of Brunner's glands in the duodenum. But there is reason to conclude, that such was not the complication in this instance, but that the hæmorrhage resulted from atonic exudation from the capillaries of the mucous membrane of the colon. The hæmorrhage occurred too early in the disease to render ulceration of Peyer's glands probable, although in the malignant form of the disease, in hot seasons and climates, that lesion has occasionally been recognised at even an earlier period. This view is countenanced by all the symptoms of pain and irritation, though never considerable, being confined to the course of the large intestine; and also because both the nasal and bronchial membranes, with their slighter sanguineous discharges, shew that some general cause was at work, seriously damaging the nutrition of the tissues. And here we must invoke not only the miasm of terrestrial or marshy emanations, but also the enervating influence of anxiety and intense application of the mind, to account for the degeneracy of the tissues and the dyscrasy of the blood.[1] An epidemic influence seemed also prevalent in Cambridge at that time, which would further depress the powers of life. Several students suffered from fever, and a friend of my son's, in the same college, died of it. I have also ascertained, that one of the first symptoms which, in his case, created uneasiness, was *hæmorrhage from the nose and lungs*, although it was not to any great extent, and did not continue long.

My son's case was undoubtedly one of low congestive remittent fever; and, looking at the depressing causes at work, it very nearly resembled in its hæmorrhagic tendencies continued fever with putrid symptoms, the hæmorrhage of which, says Dr. Watson, "is strictly of the passive kind, and a symptom of the worst omen."[2] Additional light is thrown upon it by the results of grave surgical injuries, in the shock they give to the nervous system, and through it in their power to disorganize the mass of blood, so that, as Mr. James well argues, "a change ensues

[1] Andral, vol. i, p. 339.

[2] Med. Gaz., vol. x, p. 472. Dr. Roupell insists on two forms of hæmorrhage from the bowels in typhus fever; the one occurring early in the disease, and resulting from increased activity of the vessels; the other in the later stages of the disease, as large passive bleedings. He illustrates the distinction by the two forms of purpura hæmorrhagica. *Roupell on Typhus.*

in every part of the body; and the previously healthy man is converted into a mass of disease."[1]

Dr. John Rose Cormack, in his able treatise already referred to, on the "*Natural History, Pathology, and Treatment of the Epidemic Fever prevailing in Edinburgh and other Towns in* 1843," furnishes a most striking parallelism between the capital features of my son's case, and those which characterized what he calls "the highly congestive form." In the hæmorrhagic tendency, especially, the similitude obtains. Thus, in one of Dr. Cormack's cases, there were epistaxis and black vomit during life, and after death the scalpel revealed the gastro-intestinal mucous membrane here and there dark-coloured, with sub-mucous exudation of blood in patches, and black matter in considerable quantity throughout the entire alimentary canal; in another, hæmorrhage from the vagina; in another, epistaxis and purple spots; in another, black altered blood issuing from the rectum; in another, purpura, and hæmorrhage from the lungs; in another, epistaxis during life, and after death were found softened heart, and dark-coloured gastro-intestinal mucous membrane, with black patches, and sub-mucous exudation of blood; and, in another, hæmorrhage from the rectum during life, while the scalpel revealed considerable effusion of blood under the endocardium of the left ventricle, and vascularity of the gastro-intestinal membrane, with sub-mucous exudation of blood. These post-mortem appearances of the alimentary canal Dr. Cormack interprets otherwise than as evidences of violent inflammation. "In the yellow cases of the fever", he remarks, "now prevailing in Edinburgh, this same altered state of the gastro-intestinal mucous membrane is found; but there is *no lymph effused; nothing, in fact, indicative of inflammation,* unless in some severe cases, which linger long; in such I have seen inflammation around effused clots of blood, which seemed to have been the cause of this, just as any other foreign body might act". (p. 92.) His pathology of the disease recognises, in the earliest stage, "a dissolved state of the blood, and a want of tone in the capillary vessels"; and in the subsequent stages of the disorder, "when the vital fluid is still more dissolved, its increased ability to circulate in the capillaries from the enlarged calibre or relaxed state of these vessels". "Another class of symptoms", says he, "produced by this capillary congestion, is hæmorrhage from the mucous membranes, with occasional black vomit". That the blood is "really in a dissolved state", he infers "from its imperfect coagulation when first drawn by phlebotomy, from the ecchymosis surrounding flea-bites, and other slight injuries of the skin, from the frequent occurrence of purpurous spots, from the hæmorrhages, and from the discoveries by the microscope." (p. 113.)

We were threatened, as a *sequela* of the fever, in my son's case, with serious inflammation of the fascia and periosteum in the upper part of the left leg, during the second week of convalescence; but it was arrested in the adhesive stage by twice applying a few leeches.

Throughout this anxious case I was much aided by my friend Mr. Edward Wallis, whose kindness, ability, and enlightened views of pathology, were a great relief to me in the most trying moments.

Hull, January 1851.

[1] Trans. of the Provincial Med. and Surg. Association, vol. xvii, p. 57.

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Mikroscopische Anatomie, oder Gewebelehre des Menschen. Von Dr. A. Koelliker, Professor der Anatomie und Physiologie in Würzburg. Zweiter Band : Specielle Gewebelehre. Erste Hälfte : von der Haut, den Muskeln, Knochen, und Nerven. Mit 168 Holzschnitten und 4 lithographirten Tafeln. pp. 554. Leipzig : 1850.

[The Microscopic Anatomy or Histology of Man. By Dr. A. Koelliker, Professor of Anatomy and Physiology in Würzburg. First Half of the Second Volume. Woodcuts and Lithographs. Leipzig :[1] 1850.]

The high reputation which Professor Koelliker enjoys as a histologist is amply maintained in the excellent work, of which the first part that has appeared is now before us. The author has been led, doubtless for some good reason, to postpone the publication of the first volume, which is to treat of the elementary tissues. When the work is completed, it will form a perfect encyclopædia of histology, which it will long be difficult to equal or surpass.

The first half of the second volume is divided into four books, containing an elaborate description of the General Anatomy of the Skin and its Appendages, the Muscles, Bones, and Nerves. The structure and development are detailed ; and some physiological observations are also added.

The First Book contains a description of the Skin and its Appendages. The cutis is described as consisting of subcutaneous cellular tissue and corium, and containing, in certain parts, muscular fibres, as well as adipose tissue, blood-vessels, and nerves ; and the epidermis, as consisting of the *rete Malpighi* and the horny layer.

Professor Kölliker states that he has discovered the existence of muscular fibres in the cutaneous texture, to a much greater extent than is usually described. Todd and Bowman, and Valentin, have mentioned their presence in the dartos ; but the author finds them also in the subcutaneous areolar tissue of the penis and perinæum, in the nipple and the areola, and in the hair-follicles and cutis proper in all parts covered with hair. In the dartos and integument of the penis, they are in the form of bundles, loosely surrounded by the areolar tissue. The bundles present longitudinal stripes, and a finely granular appearance, with a great number of very long and narrow, often slightly tortuous nuclei, from about the 11-1000th to the 13-1000th of a line (132-1000th to 156-1000th of an inch) in length ; there is also a small admixture of nucleated areolar tissue surrounding them like a sheath ; and, very rarely, there are tortuous nuclear fibres within the bundles. These bundles are most large and numerous in the dartos, where they measure from 1-36th to 1-24th of an inch in length, and smallest and least numerous in the perinæum and prepuce. They form a network, which is so thick in the dartos as to constitute a true muscular membrane.

" In the areola and nipple, the non-striated muscular fibre is regularly found, especially in the female sex. The bundles are of the same nature as those in the dartos ; but they have no sheath of areolar tissue, nor intermixed nuclear fibres. In the areola, they are arranged circularly in a tender layer, becoming stronger as it approaches the base of the nipple ; their breadth reaches to 1-36th of an inch ; from this, and their reddish-yellow colour, they are easily perceived by the naked eye. In the nipple itself, they are partly circular, partly longitudinal, and are united into a thick network, through the meshes of which the excretory ducts of the mammary gland appear. The chief part of these muscles lies in the cutis, and forms a good portion of its deeper layer ; but a smaller part, especially in the areola,

[1] Published in London by Williams and Norgate, Henrietta Street, Covent Garden ; to whom we are often indebted for great facilities in obtaining the latest German works on medicine.

is also seated in the subcutaneous areolar tissue." (p. 14.) This discovery is highly interesting. In his work on *Parturition and the Principles and Practice of Obstetrics*, Dr. Tyler Smith has, reasoning from the discovery by Professor Owen of muscles connected with the nipple in the monotremata and marsupiata, expressed his belief that lactatory sphincters are present in the human mammary gland. If Professor Kölliker's description be found correct by competent observers, there will be supplied what was wanting to prove the truth of Dr. Smith's conjecture. Do these muscular fibres undergo hypertrophy during gestation and lactation? Reasoning from analogy, we should be inclined to answer in the affirmative; in the meantime, however, we can only suggest it as an interesting subject for investigation.

In the hair-follicles, Dr. Kölliker believes muscular fibres to be present in all hairy parts; he has found them on the arm, on the chest in both sexes, in the anal region, in the mons veneris, in the labia minora, the hypogastrium, the thigh and leg; while they are absent from the palm and sole, and other hairless parts.

At pages 42 and 43, we find the following remarks on the elasticity and contractility of the skin: "There has not hitherto been a sufficient distinction drawn between contractility and elasticity. It is not contractility, but elasticity, that explains the gaping of wounds, the retraction of the skin in amputations, etc. On a vital power of contraction depend the wrinkling of the integument of the scrotum and penis, the erection of the nipple, and the formation of the so-called cutis anserina. . . . In erection of the nipple, the areola is narrowed by the contraction of its circular fibres, and the nipple itself is, apparently quite passively, pushed forward. . . . The *cutis anserina*, which consists in an entirely local contraction of the parts of the skin surrounding the hair-follicles, so that the openings of the follicles project in a conical form, is easily explained by the small bundles of unstriped muscular fibre, which I have found to be placed at the side of all the follicles. They pass obliquely from the upper part of the cutis down to the follicle, and, when they act, push forward the latter and retract the former.

"The contraction of these muscles is excited by cold (as in the scrotum, the areola, and in the hair-follicles); or through mental affections, as fright, terror (as in *cutis anserina*); from irritation of the incident nerves of the reflex system (as in the scrotum, and in *cutis anserina*); or through mechanical influences (as in the areola); hence it seems, in part at least, under the influence of the nervous system. The electric stimulus also is effective; in living men, strong local *cutis anserina* and erection of the nipple can be thus produced."

Passing over the sections on the Nails, we find an excellent account of the general anatomy, growth, and development of the Human Hair; from which we extract the author's account of the observations which he has made on the

Changes which the Hair undergoes after Birth. "The process and nature of the change which hairs undergo after birth has hitherto been very imperfectly known. Valentin and Henle, with others, have indeed stated that the lanugo partly falls from the head, and is replaced by new hair; but any more accurate information as to the *when* and *how* of this process has been entirely wanting. I have discovered that, at least in many cases, there is an *entire shedding of the hair* after birth, and that *new hairs grow in the follicles of the primitive hairs, which they gradually push out*, in the same manner as has been found by Heusinger and Kohlräusch to take place in the shedding of hair in animals. The first observations, which led me to the knowledge of what occurs in the shedding of the human hair, were made on the lanugo of a new-born child.

"The hairs here (Fig. 1, 37 in original) all presented a peculiar structure at their lower end. The simple club-shaped or roundish enlargement was not found here as formerly; but from the bulb, which was quite conspicuous, there projected a longer cylindrical process, either somewhat to one side or directly downwards, which at first possessed at one end a depression for

lodging the papilla. Secondly, the hair did not extend in the continuation of the bulb, but terminated in the bulb itself, and was in a peculiar manner very sharply defined by a somewhat thicker little bulb, indented at the edges, and dark like the hair itself. Thirdly, the interior sheath of the root was but just present, or not at all, while the exterior sheath appeared perfectly developed, surrounded the little bulb, formed the proper bulb, and was connected directly with the process above described. The latter, which measured from 45-1000ths to 1-10th of a line, was just of the same structure as the external root-sheath, consisting throughout of small, roundish, nucleated cells without pigment; and it could, from this agreement in structure and from its well-defined connexion with the external root-sheath, be considered as proceeding from the latter. The hairs themselves presented at their lowest part no traces of still tender and roundish cells, such as usually appear, but consisted throughout of hardened elements, like those in the shaft." (pp. 141-42.)

Fig. 1.
(37 in original.)[1]

Professor Kölliker observed these appearances even before the end of fœtal life; but was only able to determine their signification from examining the hairs of a child nearly a year old, where he found evident proof that the extension of the hair-bulb or of the external root-sheath was only preliminary to the formation of new hairs in the follicles of the old ones. The following is his description of the series of changes which take place.

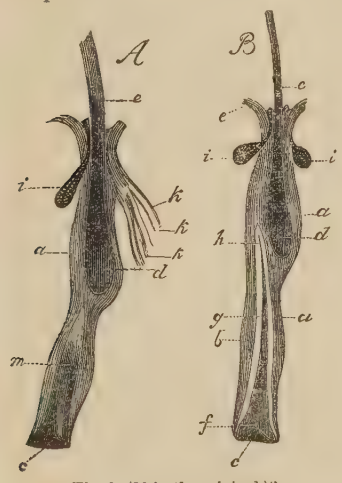


Fig. 2. (38 in the original.)[2]

"If the parts at the base of one of the roots with processes, already described (Fig. 37), be examined, the processes will be observed to become longer and thicker, and to present a separation of the outer and inner cells, like that which has been described as taking place in the planting of the lanugo in the processes of the Malpighian layer of the skin. While the outer cells of the processes remain round, and colourless, the inner ones begin to develope pigment, and to become elongated; and they group themselves together distinctly as a conical mass, with the point directed upwards.

[1] Eyelash from a child a year old, with a process 12-100ths of a line in length from the bulb, or rather from the external root-sheath, and presenting a depression for the papilla. Magnified twenty diameters. *a.* External root-sheath; *c.* Depression for receiving the papilla; *d.* Bulb of the hair; *e.* Its shaft; *e* (on left hand). Transition from the external root-sheath to the Malpighian layer of the epidermis; *i.* Sebaceous glands drawn out with the hair.

[2] Eyelashes from a child, magnified twenty diameters. *A.* Represents a process from the bulb or external root-sheath, 25-100ths of a line in length, with the central cells (*m*) arranged longitudinally, and separated from the external one, forming a distinct cone. *B.* An eyelash in the process of which, 3-10ths of a line in length, the internal cone has become developed into a hair and its internal root-sheath. The old hair is pushed farther out; and, as in *A* and in fig. 37, is destitute of an internal root-sheath. *a*, *c*, *d*, *e*, *i*, as in fig. 37; *b.* Internal root-sheath of the young hair; *f.* Bulb; *g.* Shaft; *h.* Apex of the young hair; *k.* Three perspiratory ducts, opening in *A* into the upper part of the follicle.

At first (Fig. 2*A*, 38*A* of original), this central mass is quite weak, and, like the cellular layers surrounding it externally, easily soluble in soda; but, at a later period, when, like the process which contains it, it has become longer, its elements become harder, and are divided into two parts; a darker inner one, containing pigment, and an outer clear portion. These are nothing else than a young hair, with its sheath (Fig. 2*B*, 38*B* in original); and thus the meaning of the mysterious processes from the hair-bulbs is rendered evident."

"The subsequent development of the *two hairs*, present in the same sheath, is easy to follow. The principal circumstance is, that while, on the one hand, the young hair with its sheaths continues to grow and lengthen, on the other hand, the old hair, which has ceased to grow, is gradually pushed out. A comparison of Figs. 38*B* and 39 will render these processes more easily comprehensible than any description. In Fig. 38*B* the second hair is observed with its apex not yet projecting beyond the internal root-sheath, and surrounded by a moderately long external sheath, while the primary hair still occupies a considerable portion of the follicle. In Fig. 39, *A* represents the young hair, with its point at the opening of the old follicle; the root-sheaths have become lengthened, and the under one has grown upwards with the bulb of the dead hair, which is pushed further out. In Fig. 39, *B*, the young hair has entirely emerged, and appears at the same opening with the old hair, now pushed still farther up. Its internal root-sheath is still more lengthened, and reaches as high as the insertion of the sebaceous and perspiratory glands, which latter open very frequently —sometimes as many as three—into the upper part of the follicle of the eyelids. After this, the old hair soon falls out, while the young hair increases in size and strength, and fills the space left by the old one." (pp. 141-5.)

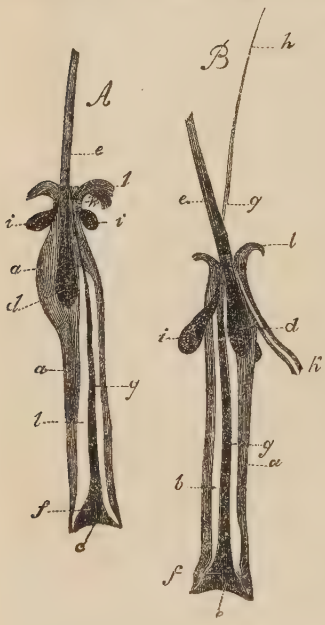


Fig. 3. (39 in the original.)[1]

This description, as yet, applied only to the eyelashes. In the head, and other parts of the body of the same child, the author found only a single hair; but it presented the process of the bulb. He believes it probable that a similar change takes place here also, but cannot decide how soon it occurs; and says that further observations are necessary on this point.

The Sudoriferous Glands mostly consist of single coiled canals; but Dr. Kölliker has found that, in the axilla, the tube generally bifurcates many times into branches, which again divide, and sometimes, but rarely, form anastomoses; they end in blind sacs, after having frequently given some off. The canals are described as thick-walled, and thin-walled. The former possess only an external nucleated fibrous membrane and an epithelium; the latter has within the fibrous sheath a layer of pale muscular fibres, on which the epithelium immediately lies. The secretion of the sweat-glands is said by the author to be not the same in all cases. In most parts of the body, it

[1] Two eyelashes from a child a year old, each containing an old and a growing young hair. Magnified twenty diameters. The references are the same as in the preceding figures.

is a clear fluid ; but in the axilla, he has found it either as a greyish transparent slightly fluid substance, apparently consisting of nothing but fine granules and numerous nuclei, or as a yellowish white, tolerably tenacious mass, containing, in variable quantity, large numbers of large, dark, colourless, or yellow granules, nuclei, and cells. The subject of the secretion of the sweat-glands, especially those of the axilla, is acknowledged by the author to require further chemical and microscopical investigation. It will be conceded, on a perusal of his account, to which we must refer our readers, that he has contributed a fair share towards clearing the obscurity.

The Ceruminous and the Sebaceous Glands are next treated of. The author considers that his observations on the development of the latter will be interesting with regard to the question of the formation of glands. They appear during the formation of the hair, as masses of cells continuous with the external root-sheath, and covered by an extension of the follicle. The interior cells begin to form fat-corpuscles ; at first these are entirely isolated, but at length they proceed in the axis of the projection as far as the external root-sheath, and an opening is formed into the hair-follicle. The process, in its various stages, will be better understood by a reference to Figs. 36 and 51 of the original work, which beautifully represent the sebaceous glands being gradually developed as diverticula from the hair-follicles.

With the description of these glands, the author concludes the first book.

The Second Book is devoted to a highly elaborate description of the Striated Muscular Tissue. The opinions of Bowman, Henle, Valentin, etc., on the minute structure of this tissue, are commented on, according as they have been confirmed, or negatived by the author's own investigations.

Anastomoses of Muscular Fibres. It has hitherto been generally believed, that the muscular fibres run in a direct course, without dividing or anastomosing. But in 1849, Professor Kölliker described anastomoses in the auricle of the frog's heart. Two primitive bundles were here and there united by a transverse bundle ; not by mere apposition, but by a division of the sarcolemma into three separate tubes. Leydig and Hessling have made the same discovery in the invertebrate animals.

The author has since found, that anastomoses of the muscular fibres had been already described and figured by Leeuwenhoeck, as taking place in the heart of the duck, ox, and cod ; but histologists subsequently have taken no notice of the occurrence of this fact, with the exception of Frei and Leuckart, and Wagner, who have referred to it as occurring in some of the invertebrata ; and it has been more recently and carefully observed in the butterfly by Hessling, and in the *piscicola* and *clepsine* by Leydig. Professor Kölliker and Dr. Corti have found "that anastomoses of the striated muscular fibres evidently occur in the hearts of all vertebrate animals. They are seen in man, in the rabbit, calf, dog, cat, heron, frog, and, according to Dr. Leydig, in the chub. In man, and mammalia, they are very numerous and elegant, and are formed by very short transverse or oblique branches, usually slender, passing between parallel bundles. In the larynx, œsophagus, pharynx, and tongue of the

Fig. 4. (58 in original.)[1]

[1] Ramified primitive bundle, 18-1000ths of a line in diameter, from the tongue of a frog. Magnified 350 diameters.

rabbit, they could not be seen; in the tongue of the frog, immediately under the mucous membrane, there were numerous ramifications of the muscular fibres, but no anastomoses. . . . . In the muscles of the trunk and limbs of man and mammalia, I have seen no trace of anastomoses of the bundles; but it seemed to me as if certain fibres, here and there, were divided into two or more portions, before and at their insertion into the tendons; and I have certainly seen this in the tail of the tadpole." (p. 210.)

The manner in which the UNION OF MUSCLES WITH TENDONS is effected is as yet imperfectly known. Professor Kölliker has made this a subject of investigation; and we shall give an abstract of the results at which he has arrived.

Muscles and tendons are, in some cases, in a direct line; in others, the muscular fibres end at acute angles to the borders or surface of a tendon or aponeurosis, as in the penniform and semi-penniform muscles. The microscopic arrangement is distinct in each of these two cases. In the first, there is no abrupt limit between the muscular and the tendinous fibres; this may be well observed in the intercostal muscles of man. The author has, however, been unable to determine, with complete accuracy, the intimate relations of the structures to each other. He is certain that the sarcolemma does not form a closed sac, but passes without dividing into the tendon; but as to what becomes of it, whether it becomes continuous with the most superficial tendinous fibres, or ends in any other way, he cannot decide, though he is in favour of the view that it ends in the external part of the tendinous bundle. In the interior, the tendinous fibre appears to meet the muscular fibre in the form of a compact bundle; but, with regard to the arrangement of the fibrils, all that the author has been able to make out is, that the transverse striæ become less distinct as the muscular fibre approaches the tendon, while, at the same time, the primitive bundles (fibres) undergo a sort of splitting, as is seen by more or less distinct longitudinal streaks. The transition from muscle to tendon does not generally occur at the same height, and therefore cannot be accurately defined by a straight line.

In the second form of connexion, the fibres end abruptly in cones, more rarely in sharp points, and are set at more or less acute angles on the borders and surfaces of the tendons and aponeuroses. In this case, although there is not a direct continuity of tissue, yet the union is very firm. Professor Kölliker finds "that the ends of the muscular fibres are received into little depressions on the surface of the tendons, while at the same time the areolar tissue between them *(perimysium internum)* becomes continuous with that of the surface of the tendon." These appearances are best seen in muscle which has been kept in spirit, or boiled. With regard to the manner in which the sarcolemma ends, the author states it difficult to determine; but he has sometimes succeeded in distinctly seeing its blind terminations.

We must pass over the remaining subjects treated of under the head of Muscular Tissue, merely observing, that the author gives evidence throughout of his having carefully investigated every point on which he offers any remarks. The observations on the disposition of the fibrils during muscular contraction are especially worthy of being perused with attention.

The Third Book is devoted to a description of Bone; under which head are also included the Cartilages and other structures entering into the formation of Joints. We can merely quote from it the author's account of his investigation on the Nerves of Bone, to which subject he has paid considerable attention.

"NERVES OF THE OSSEOUS SYSTEM. The periosteum is rich in nerves, of which, however, the greater part belongs to the bones. The number of nerves proper to the periosteum itself is tolerably scanty, and Pappenheim seems right in entirely denying their presence in certain parts; at least I have not been able to find any in the inner surface of the vertebral arches, on the neck of the femur, or beneath certain muscles, as the glutæus minimus and peronæi.

Yet there are probably no bones, on certain parts of which they are not found, for I have seen true periosteal nerves on all the large tubular bones, on the flat bones of the skull, on the jaws (especially the alveoli), on the scapula and ilium, on the bodies of the vertebræ, and on the metatarsus. The nerves are in the same layer as the vessels ; they sometimes accompany the larger twigs, sometimes are alone ; and arise, in part at least, from the larger nerves of the bones. Though few in number, and with few ramifications and anastomoses, they evidently spread over a large extent of surface. The primitive fibres measure from 2-1000ths to 4-1000ths of a line ; but, partly through true division, as I have quite distinctly seen in the periosteum of the infraspinous and iliac fossæ in man, and as Czermak has observed in the frontal bone of the dog, and partly by gradual decrease, they reach the size of 12-10,000ths to 16-10,000ths of a line. How these nerves end, I cannot say with certainty. I have seen nothing of loops ; in two cases I thought I saw free endings in points, yet I cannot affirm certainly that they really were such. About many of the joints, as the elbow, knee, and knuckles, I have seen the nerves more abundant than in other parts, ramifying and anastomosing very freely in the vascular areolar tissue above the proper periosteum, and chiefly following the course of the vessels ; yet I could not see here the divisions and terminations of the primitive fibres.

"The nerves have not the same arrangement in all bones. First, in the larger long bones, one or two tolerably large twigs, according to the number of nutritive foramina, pass directly into the medullary canal, where they spread out, following the course of the vessels as far as the apophysis, but not always lying on them ; they ramify abundantly, but, at least as I have seen, form only a few anastomoses. Secondly, all these bones, as I find in opposition to Engel, possess also numerous fine nerves in the apophyses, which pass with the blood-vessels, here very numerous, directly into the spongy substance, and ramify in its marrow. Thirdly, very tender filaments penetrate with the fine arteries into the compact substance of the diaphyses, and here doubtless spread out, although I have not yet been able to trace their course in the firm substance. The arrangement is the same in the smaller long bones in the hand and foot ; only the division into apophysal and diaphysal nerves is not so regular.

"Among the short bones, I found the vertebræ extremely rich in nerves, especially the bodies. They penetrate from behind, in company with the arteries and the basivertebral veins, as well as from the front and sides, and spread out in the medulla of the spongy substance. I saw one or more nervous filaments. I have not yet examined the bones of the carpus, but do not doubt that they also possess nerves.

"In the scapula and ilium, the nerves are very numerous, and penetrate with the larger vessels, partly on the surface, partly in the region of the articular cavities. In the sternum, and flat cranial bones also, the observation of the nerves is difficult. In new-born children, I have seen nerves in the parietal and occipital bones ; and in adults, the parietal and occipital bones are, although sparingly, provided with microscopic filaments, which here and there pass from without, along the small arteries, into the compact substance, and apparently penetrate into the diploë. . . . How the nerves of the bones end, I have not seen ; but this will readily be comprehended by those who know the difficulty of following them in the spongy substance, or the marrow. In two places, I have seen Pacinian corpuscles on the nerves before their entrance into the bones ; on the diaphysal nerve of the tibia before its entrance into the nutritive foramen, and two others on the largest nerve of the metatarsal bone of the great toe, likewise in the neighbourhood of its point of entrance." (pp. 337-340.)

The whole of Dr. Kölliker's remarks on bone, and its accessory structures, are elaborate ; but we have not space for any further quotations from this part of the work.

The Fourth Book treats of the Nervous System. It commences with a

description of the elementary structures—nervous tubules and cells. The arrangement of these elements in the spinal cord, and the origin of the peripheral nerves, are next examined; and some physiological observations are appended. The medulla oblongata, pons Varolii, and cerebellum, are next treated of in a similar manner; and the arrangement of the microscopical elements in various parts of the cerebrum is carefully described. After a notice of the membranes, and an account of the structure of the spinal and cerebral nerves, the book is terminated with the development of the nervous elements. This portion of the work occupies 159 pages; and contains much valuable information on the subject of which it treats; for which, however, we must refer our readers to the work itself.

It now remains for us to say a few words as to the general character of Professor Kölliker's *Mikroscopische Anatomie*. It bears the strongest evidence that the author has spared no pains, either to make himself acquainted with all that has been written on the various subjects of which he treats, or to test the descriptions given by others by his own observations. Hence we find, that the work contains a summary of the views of nearly all those histologists who have made any additions of value to our knowledge of anatomy of the tissues, especially during the last ten, or twelve years. There may be some omissions; but they are certainly very few, and insufficient to detract in the least from the value of the work. The source of every opinion quoted is carefully acknowledged; and frequent bibliographical lists of the authors, who have written on the subjects treated of, are interspersed. Yet the book is far from being a mere compilation. The high reputation which the author enjoys forbids this supposition; and we find evidence throughout that he has examined for himself.

The general plan on which the work is printed is the following. A careful account, divided into sections, is given of the structure and development of each tissue. This part is that which may be read by those who are entering on the study of the various subjects. Every thing is here stated in a clear manner, and to these portions of the work most of the woodcuts—which are excellently calculated to give an idea of the subjects which they represent—are appended. For the use of those who are desirous of becoming more closely acquainted with the literature of the various subjects, a critical abstract is given of the views of previous and contemporary observers, which is printed in a smaller type, so that it may be studied or omitted, according to the inclination and opportunities of the reader.

In conclusion, we can only reiterate our sense of the obligations which all students of histology, both those who are commencing, and those who are more advanced, are under to Professor Kölliker for publishing this work. In Germany it must become the standard work on the subject; nor will the library of any anatomist or histologist be complete without it. We trust that the remaining parts will speedily follow.

On the Crystalline Lens, and Cataract. By Bernard Edward Brodhurst. pp. 243. London: 1850.

There is scarcely any subject which has been more prolific in books than Cataract. At first sight, it might appear difficult to account for this, as the treatment is well understood; and, as to the character of the disease, it generally happens, that what is put forward as new is not true, and that which is true is certainly not new. The explanation, perhaps, is to be found in the fact that such works, in the majority of instances, emanate from gentlemen young in the profession, but who are anxious to make themselves favourably known amongst that extensive and not particularly discriminating class—the public.

After a careful perusal of the work before us, we cannot say that it possesses much claim to originality; though clothed in other language, the

contents are old and familiar friends. Here and there, there is a sprinkling of information from the German schools ; but most decidedly the views given as novel are rather hypothetical than established.

Mr. Brodhurst considers the chief causes of Cataract to be deficient nutrition, and inflammation. Werneck makes a statement which is harder to believe, and if believed, dangerous in practice. He states, that if the intense light produced by the burning of phosphorus in oxygen be concentrated by means of a lens on a Cataract, it may be broken up. He also say, that the retina is not injured. These are statements which appear to us fraught with danger ; for we do not believe that such tricks can be played with the human eye with impunity. We are of opinion, that such a step as that described would set up mischief in the retina, and scarcely fail to produce amaurosis. Dr. Werneck experimented upon animals ; but we need scarcely say, that great caution is requisite in applying reasoning founded thereon to the more sensitive and more highly organized frame of man.

If we understand Mr. Brodhurst correctly, he denies the muscularity of the iris, considering it to be composed of loose cellular tissue and pigment deposit, and defining it as "an irritable membrane without sensation, and its sole function in voluntary motion." Although not identical with the ordinary unstriped muscular fibres, those of the iris have a really close analogy to them ; and the resemblance is strengthened by the fact, that in man, birds, and reptiles, the fibres in all repects are similar to those of the striped muscular fibres ; it is therefore reasonable to suppose, until the contrary can be proved, that the iris is composed of muscular, and not simply cellular tissue.

As regards the disappearance of the Pupillary Membrane, the views of the author are entirely at variance with those entertained by the learned President of the Dublin College of Surgeons. Dr. Jacob supposes it to be absorbed ; Mr. Brodhurst says : "This membrane is not absorbed, as supposed by Dr. Jacob ; but it is ruptured at birth by the action of light upon it ; it is detached from the iris, either wholly or in part, to fall down upon and become adherent to the anterior capsule of the lens ; there it remains, and is never removed." Further evidence will be required, before this view can be accepted. In what way does the author mean that the action of light ruptures it ? Does he mean that the action of the pupil produces the effect ? The mere action of light could not of itself produce such an effect as the tearing of a membrane, unless it excited some expansion or contraction, which immediately acted upon it. The meaning of the author is by no mean clear.

"A mature Cataract", says Mr. Brodhurst, "if allowed to remain *in situ*, is injurious. It may give rise to inflammation, which may unquestionably be propagated to produce cataract in the other eye ; but it is more especially injurious by preventing the passage of light to the retina, by witholding its natural stimulus from the membrane, which, thus long deprived, may never recover its power, or only in part, and that after the lapse of time." (p. 71.)

Although we by no means advocate unnecessary delay in removing a Cataract, we consider that this "unquestionable" fact of Mr. Brodhurst's is very questionable indeed. We have had some experience in these matters, but have never seen anything which led us to believe that a Cataract in a healthy eye gives rise to inflammation which may be propagated to produce Cataract in the other eye. We believe, that where both eyes are affected, it is is simply from the original exciting cause influencing both lenses, and not from any "propagating of inflammation" or anything else, from one eye to the other.

Amongst the exciting causes of Cataract, cold and damp are specified ; and the illustrations are remarkable. An Austrian sea-captain had been in the constant habit, for years, of washing his head each morning with salt-water, and of allowing the hair to dry in the wind whilst he paced the deck of his vessel. Three months previous to his appearance at the Josephinum, his sight had suddenly begun to fail, and he had become rapidly blind with

Lenticular Cataract. Jäger gave it as his opinion, that these repeated ablutions, without subsequent careful drying of the hair, had produced the opacity in question. Subsequently Mr. Brodhurst met, at Rome, with two cases of Cataract, arising under similar circumstances. How far, however, these might have been merely coincidences, or really cause and effect, must remain a question open for further observation to decide, though we apprehend the Byronic mode of dressing the hair, *i.e.*, washing it in cold water, and letting it dry in masses, is far too common to admit of the supposition that it is an exciting cause of Cataract; otherwise the relation between the two would have been long since remarked. We remember once having heard a learned *clinique* given on a certain set of symptoms, described as arising from exhaustion of the system, caused by a superabundance of hair. The symptoms were well marked, the mass of hair was wonderful to behold, the pupils were edified, and the professor satisfied,—when, lo! it was discovered that one slight link in the chain of reasoning was wanting, for though a model in its way, it turned out that the patient wore a wig!

The most interesting portion of Mr. Brodhurst's book is that relating to the practice of the great German oculists Jäger and Rosas. A table is given, by which it appears that, in eighteen years, Jäger has operated on 1011 Cataracts! and of 737 extractions, only thirty-three were unsuccessful; a very remarkable and creditable amount of success. The following is the proportion of unsuccessful cases in the practice of some of the chief foreign oculists.

Jäger	1 in 42	Prochaska	1 in 5
Beer	1 in 9	Roux	1 in 2(!)

Great as is the success of Jäger, we are inclined to think that the practice of the late Mr. Tyrrell was nearly equal during the last years of his life; but Mr. Brodhurst does not make mention of the successful proceedings of his countrymen.

The Surgeon's Vade Mecum. By Robert Druitt, F.R.C.S. Fifth Edition, much improved. pp. 660. London: 1850.

The fact that Mr. Druitt's *Surgeon's Vade Mecum* has reached a fifth edition, is a sufficient proof of the estimation in which it is held by the medical profession. The present work is by no means a mere reprint of former editions, but the author has very judiciously made such alterations as are demanded by the progress of surgical science, though without adding materially to the bulk of the volume. This has been accomplished by expunging some of the explanatory matter, formerly necessary to introduce new facts to the notice of the profession, but now superfluous, as these facts have become current, and their truth generally acknowledged; and by substituting a description of the various improvements which surgery has received during the last three years. The work may be thus considered as offering a very excellent and well-digested abstract of the science and practice of surgery at the present day. There is one feature which distinguishes Mr. Druitt's work from other books of a similar character, namely, that the author draws largely upon the collateral sciences, to add completeness to his subject; and we accordingly find, that while the work is, as it professes to be, a very excellent manual of surgery, it nevertheless displays an intimate acquaintance with the whole field of medicine, and contains a vast mass of information of the greatest utility to practitioners of every branch of the healing art.

As an instance of the care with which the author has collected facts which are sometimes considered of trivial moment, but which are nevertheless most valuable for the practitioner to be acquainted with, we quote the following remarks upon the different kinds of trusses, and the peculiarities by which each is distinguished:—

"There are some cases, in which the common truss fails to keep up a rupture comfortably; and for these the surgeon should be prepared to re-

commend other instruments, which are, for the most part, the property of various individuals, and each of which has some peculiarity, adapting it to particular cases. *Coles's truss* has a spiral spring acting on the pad. The *Moc-Main lever truss* has a simple belt passing round the body, thus dispensing with the usual circular spring; and the pressure on the pad is effected by means of a strap passing under the thigh, and acting on a spring lever attached to the pad. *Salmon and Ody's self-adjusting truss* has a pad revolving on a ball and socket. The *Maidstone truss* allows the pad to slide on the spring, so that the circumference of the instrument may be adapted to the varying size, or movement of the body. *Egg's truss* is said to be made of old sword blades; it is very strong, though not irksome, and requires no fastening. *Adams's graduated pressure truss* has two springs of different curves; by sliding which on one another, the amount of pressure may be varied. In *Tod's truss* the spring goes round the waist, and curves downwards, to compress a pad at the internal abdominal ring. *Newson's wire truss* has a round wire, instead of a flat steel spring, which renders it less likely to be displaced. Trusses may have French pads, which are of an oblong-triangular shape, instead of oval, like the English; or pads filled with air; or may have springs going entirely round the body. But, perhaps, the most ingenious instrument, and that which is likely to be the most useful, is one recently devised by Dr. Arnott; in which, by means of a wire, external to the steel spring, and capable of being tightened or slackened by a nut and screw, the amount of pressure can be regulated with the greatest possible nicety. For children, an *India-rubber band* and pad often answer without a spring. A pad of hard polished wood is recommended by Mr. Dartnell. He also uses flannel, instead of leather, as a covering for the spring, as it can be washed." (p. 470.)

The present edition contains a very well-written chapter upon chloroform, and other means of producing insensibility to pain: and the work concludes with a series of formulæ, which will be found of great value, not only to the student, but to the practitioner engaged in the active duties of the profession.

Observations relating to the Science and Art of Medicine. By William Wegg, M.D. Cantab., Physician to the St. George's and St. James's Dispensary. pp. 233. London: 1851.

After an introduction of thirty-nine pages, upon "Remedies in general", in which the reality of the therapeutic action of medicines is well set forth, the author considers successively, and in detail, the following subjects:—blood-letting, mercury, iodine, antimony, arsenic, iron, colchicum, opium, hydrocyanic acid, stramonium, strychnine, quinine, alimentary canal, and support. Want of space, and the general plan of our Journal, prevent us from giving a critical examination of the many interesting views here presented to our notice; but we have much pleasure in stating, that the work is highly instructive, and proclaims its author to be a sober, sound, and able physician.

Physician's, Surgeon's, and General Practitioner's Visiting List, Diary, Almanack, and Book of Engagements for 1851. Part I for the Library Table; and Part II for the Pocket. London: 1841.

This is the best contrived publication of its class; and does great credit to its editor and publisher. The periodoscope—Dr. Tyler Smith's useful and ingenious instrument—is attached to the inside of the part intended for the pocket.

The Anatomist's Vade Mecum; a System of Human Anatomy. By Erasmus Wilson, F.R.S. Fifth Edition. pp. 656. London: 1851.

We are glad to welcome a new edition of this admirable and beautiful manual, alike adapted to the dissecting-room and the library table.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

OBSTRUCTION OF THE BOWELS, ARISING FROM A PECULIAR CONFORMATION OF THE SIGMOID FLEXURE OF THE COLON, TERMINATING FATALLY.

Dr. J. A. Easton relates a case of the above description in the *Edinburgh Monthly Journal* for December 1850. The disease under which the patient, a pregnant female, laboured, was supposed to be ileus, and the singular malformation of the colon was not even suspected during life. Active aperients and enemata, administered perseveringly, were employed, necessarily without success; a line of treatment which would not have been persisted in exclusively, had the real nature of the case, which is of comparatively rare occurrence, been apprehended. The most accurate, indeed the only description of this peculiar and rare variation in the course of the colon, which alone Dr. Easton believes to be capable of producing the disease of which this woman died, has been given by Dr. Andrew Buchanan, in the twenty-fourth volume of the *London Medical Gazette.*

The disease may be described as complete obstruction of the bowels, arising from a peculiar, and in most instances congenital formation of the colon, whereby inordinate pressure is exercised on a part of the larger bowel, by a superposed portion of the distended intestine, the result of which is great accumulation of feculent matter, and enormous distension of the belly. The sigmoid flexure, as found after death, in place of passing downwards into the pelvis from the left iliac region, ascended in the mesial line towards the left side, till it reached the region of the spleen, and thence, forming a very acute angle, it descended vertically into the pelvis, having its lower portion, where it runs into the rectum, compressed between the ascending portion of the flexure, distended with gas and fæces, lying before it, and the promontory of the sacrum lying behind it. The disease, caused by this pressure, was more readily induced, and rendered irremediable, by the superadded weight of the gravid uterus. The obstruction in this and similar cases, has been questionably attributed to a twist in the colon, at the lower end of its sigmoid flexure; but in the present instance, this view must be abandoned, simply because no twist existed; the work of impediment having been more effectually performed by a column of nearly solid intestine, pressing heavily on another portion, in contact with the promontory of the sacrum, and the gravid uterus forming the copestone of the whole.

The symptoms of this disease, of a common or general character, are, constipation and dragging pains in the back. The pathognomonic symptoms are the intractable and continuous nature of the constipation, the enormously distended belly, the empty rectum, and the excruciating pain, unaccompanied by fever, or other sign of inflammation. Dr. Easton very ingeniously and candidly observes that these ought to have enabled him to distinguish the disease from all other kinds of tympanitic swelling and constipation. We think, however, that the writer scarcely does justice to himself here; and we have very grave doubts about the facility of making a correct diagnosis in such cases. The fatal result, in Dr. Easton's case, was attributed to the persistent and excruciating pain, for inflammation was not present; and, as Dr. Buchanan has well remarked, "mere obstruction cannot be considered as an adequate cause of death, since persons have been known to live more than a quarter of a year without any alvine evacuations."

Dr. Easton, having no observations of his own to offer regarding the treat-

ment to be pursued in similar cases, avails himself of the remarks of Dr. Buchanan, who, looking on all purgatives, as well as clysters, as utterly useless, except for the purposes of emptying the rectum, observes that the first and great object of treatment should be to remove the mechanical obstacle to the evacuation of the bowels. With this object, he advises that the patient should be placed upon the hands and knees, or standing with the body inclined forward, which has the effect of freeing the end of the colon from the weight of the first turn of the sigma lying over it. He then employs an œsophagus tube, armed with a large sponge, fastened to the end, by means of a string attached to it, and passing through the tube, while, by means of the other half of the string running outside the tube, the sponge can be withdrawn, when we wish to use the tube as an injecting instrument. In the first instance, however, it is to be used as a probe and dilator. On withdrawing the instrument, we shall ascertain if it has passed the obstruction, by observing whether its point be smeared with fæces. If it have passed, we should reintroduce it, and by passing and repassing it through the compressed part, we should endeavour to form a free passage, by making an indentation in the soft feculent mass, lying before it. If this does not succeed in producing a discharge of fæces, the tube should be carried up as far as possible, the sponge withdrawn, and tepid air or water injected, as may be best found to answer the purpose. Should this plan not succeed, Dr. Buchanan advises, rather than leave the patient to his fate, that the bowels should be punctured with a small trocar, not with the view of evacuating the fæces, which could not be prevented from escaping, in part, into the peritoneal cavity, and so causing death ; but solely with the object of discharging air from the bowels, which will both relieve the sufferings of the patient, and facilitate the subsequent attempts to evacuate the fæces through the natural passages. The point recommended for puncture is about the middle of the right colon ; as that part of the bowel is most uniform in its seat, and is almost entirely distended with air. Operations for the formation of an artificial anus, by opening the colon in the situation here indicated, behind the peritoneum, in ileus and intusceptio, have been performed since Dr. Buchanan wrote. This operation may be added to our remedial resources in cases resembling the one described. Dr. Easton evidently, and we think justly, regards the ingenious treatment of Dr. Buchanan as mainly palliative and provisional.

FÆCAL OBSTRUCTION OF THE BOWELS MISTAKEN FOR OVARIAN DROPSY: EXTENSIVE TUBERCULAR PERITONITIS.

In a series of papers on the Diagnosis of Ovarian Dropsy, Mr. I. B. Brown relates the following case in the *Lancet* for July 13th, 1850.

Case. Miss F., aged 14, born in India, was brought to Mr. Brown on March 22nd, 1849. She had never menstruated ; had generally good health, but had always suffered from flatulence and distension of the bowels. Five weeks ago, great languor appeared, with rapid growth, and emaciation about the neck and shoulders. She complained of uneasiness in the left side, and that her dresses were too tight. On March 9th, an obstetric physician was consulted, who considered it a case of ovarian dropsy. He prescribed aperient pills of rhubarb and galbanum, and tincture of muriate of iron, and recommended her to wear a calico belt to support the abdomen. The remedies were persevered in, yet she daily got worse. The pulse became quick, 120 ; there was hectic flush of face, and increased languor, and the abdominal swelling rapidly increased.

On March 22, Mr. Brown found a tumour in the left iliac fossa, and fluctuation perceptible over the abdomen, below the umbilicus. On more careful examination the next day, he discovered a solid tumour above and just to the right of the umbilicus. She had passed a restless night ; skin

hot; pulse 120; tongue red, not coated; dejections very frequent, but slight, of a pale chalky colour; urine very scanty; extreme languor; general tenderness, especially at the point of the hardened tumour. She was ordered three grains of grey powder, and four of Dover's powder, at bed time; and chalk mixture, with decoction of bark and aromatic confection; also to have the abdomen rubbed with a mercurial embrocation on going to bed. On the 24th, the countenance indicated great bodily and mental depression. The medicine was continued; and the recumbent posture was enjoined. On the 25th, she evacuated an enormous quantity of hardened fæces, after which the solid tumour disappeared. Mr. Brown was now certain that there was no ovarian tumour, but that the fluid in the abdomen had arisen from chronic peritonitis. She appeared to improve slightly until the 8th of May, when she was suddenly taken worse, with shivering, sickness, pain in the abdomen, and sickness of pulse. There appeared to be ulceration of the intestines; but she lingered till the 22nd of June, when she died.

Post-mortem Examination, fifteen hours after Death. The whole body was extremely emaciated; there was no protuberance of the abdomen. On opening this cavity, there was a quantity of thick, offensive, purulent matter diffused throughout. The small intestines were rolled up into a compact ball, and so glued together by adhesions, that it was almost impossible to separate them. The whole of their serous surface was covered with tubercular deposit. This mass of intestine was fixed to the upper portion of the abdominal cavity. The lower part of the abdomen was filled with a quantity of highly offensive, dark grey-coloured, semi-liquid matter, being a mixture of pus and fæces. On separating the transverse colon from its strong adhesions, an ulcerated opening, of the size of a sixpence, was found in it, with well defined edges, having a distinct greyish-black rim. On further search, two or three other smaller perforations were detected. Purulent matter was infiltrated throughout the mass of tubercular deposit. The peritoneal coat of the uterus was diseased; the ovaries were of their natural size, and healthy. The liver was healthy, but its peritoneal coat was diseased. The omentum was matted to the intestine by adhesions. The thoracic organs were healthy throughout.

CONDITION OF THE NERVOUS CENTRES, ETC. IN HYDROPHOBIA.

Case i. Dr. J. A. Sidey relates in the *Edinburgh Monthly Journal* for December 1850, an accurately detailed case, terminating of course fatally, although various energetic remedies, including Indian hemp, Battley's solution, venesection, mercury, caustic, issue in the scalp, were employed. Anæsthesia produced by chloroform was tried, but could not be persevered in, from the accumulation of mucus in the throat and mouth, which produced urgent dyspnœa.

The body was most carefully examined after death by Dr. Hughes Bennett, who had suggested, in the *Library of Medicine*, that most of the symptoms of Hydrophobia might be caused by irritation at the roots of the eighth pair of nerves. But on the most careful examination of different portions of their structure, and of the restiform ganglion, as well as of several portions of the white and gray substance of the cerebrum, cerebellum, and spinal cord, with a microscope, under a power of three hundred diameters, not the slightest change from the healthy character could be distinguished. The circumvallate and fungiform papillæ at the base of the tongue were greatly elongated and enlarged. The salivary glands were also enlarged. The mucous membrane of the fauces and upper part of the pharynx was of a purplish-red colour. The membrane lining the trachea and bronchi to their ultimate ramifications was of a deep-red mahogany colour, and covered with san-

guinolent frothy mucus, which completely filled up the smaller ramifications. The lungs, the heart, and all the abdominal organs, were apparently healthy.

Case II. Dr. James Struthers relates, in the same journal, for January 1851, a case, occurring in a boy. In the case just detailed, there was great sensitiveness of any movement of the air; and a gust of wind, blowing on the patient, caused him to sigh frequently. In the present case, Dr. Struthers says, that while holding the hand of the patient, he blew suddenly in his face, when he sprang, convulsed, to the other end of the bed, covered himself with the clothes, shook and cried very much, and entreated that he would not breathe on him any more. *This established the diagnosis.* In both cases, active symptoms of the disease became manifest after a fright, about a month after the patients had been bitten.

On examination of the body after death, the membranes of the brain were found healthy; but the cerebral substance, both white and grey, was very slightly and uniformly softer than usual. The superficial vessels of the cerebellum and medulla oblongata were generally and pretty fully congested; the grey matter of the cerebellum was rather deeper in colour than natural. Careful examination detected nothing unusual in the cranial nerves, especially the pneumogastric, both where it leaves the medulla oblongata, and at its place of origin in the floor of the fourth ventricle. The same slight general softness, which was observed in the brain, existed in the cord, but to a less extent. The medulla oblongata was normal, and firmer than any part of the cord. The sublingual glands were natural. The trachea throughout was coated with a sanguinolent froth. Congestion, ecchymosis, and emphysema, were found in the lungs, bronchi, and trachea; these are the morbid changes most constantly found in man and animals that have died of this disease, and correspond in frequency to one of the most constant of all the symptoms, viz., convulsions of the muscles of respiration, to which they may fairly be attributed. The mucous membrane of the pharynx and œsophagus was quite natural. The most uncommon appearance was the frothy state of the blood in the right cavities of the heart, previously noticed only by Morgagni and Trolliet. There was absolutely nothing about the nervous centres and roots, which could indicate that the disease was other than a purely functional affection of the nervous system. The eighth pair of nerves were remarkably free from any appearance of disease.

Excision of the lacerated parts, and subsequent cauterisation with the nitrate of silver and pernitrate of mercury, were performed an hour and a half after the patient was bitten, a fact incontestably proving that absorption may take place within that time.

CASE OF COMMUNICATION BETWEEN THE STOMACH AND EXTERNAL SURFACE OF THE ABDOMEN.

Dr. William Robertson relates the following interesting case. Isabella Davidson, an unmarried woman, aged 36, was admitted into the Royal Infirmary of Edinburgh, in November 1850. In 1842, she first observed a tumour in the left side of the epigastrium, not exceeding a pea in size, hard, painful, and tender, which in the course of two years steadily increased to the size of an orange, when it began to subside, and in three months completely disappeared. In a month afterwards, a dark spot, of the size of half-a-crown, appeared in the epigastrium; and then, for the first time, the patient's health began rapidly to give way. On the 22nd of October, 1844, the black spot gave way, and the contents of the stomach escaped from the rent. Water and milk, when swallowed, gushed out from the opening. By the end of January following, the aperture had completely cicatrised, and continued closed for about a year. Early in 1846, the cicatrix became red, and the opening was re-established by ulceration. In a few months the fistula

again cicatrised; but in June 1847, ulceration occurred for the third time, and the communication with the stomach has existed ever since.

For the last three years, she has lain almost constantly in bed, and has worn a piece of linen, secured with a pad and bandage, over the external orifice. Her appearance is perfectly healthy, her appetite good, and the bowels habitually costive. She is cheerful and intelligent, and sleeps well.

The external perforation is situated about 2½ inches from the median line, and 3½ from the umbilicus, close to the cartilage of the eighth left rib. It is of an oval form, and will admit an ordinary-sized thumb. Its margin is rounded, depressed, hard, and red, presenting minute points of ulceration. The surrounding integuments, to the extent of two inches, are red and indurated, and, in a few points, excoriated. On passing the little finger deeply into the orifice, it meets with resistance; when turned downwards and to the left side, in the direction of the pylorus, it passes freely. The mucous membrane of the posterior wall of the stomach can be seen, when the patient is placed in a favourable light; and when she takes a mouthful of milk, it can be observed to flow over the surface opposite to the external orifice. It is believed that the perforation communicates with the stomach through its anterior wall, not far from the great curvature, and probably about four inches from the cardia. The case probably does not admit of remedy; but, from its resemblance to that of Alexis St. Martin, the propriety of instituting some experiments on digestion has been suggested, and a hope is held out that the results may be communicated, at some future period, to the profession. [*Edinburgh Monthly Journal*, January 1851.]

CASE OF INTERMITTENT FEVER WITH INTERVALS OF NINE DAYS.

Dr. Bertrand relates the following case in the *Deutsche Klinik* for Nov. 16, 1850. Although intermittent fever is endemic in the district of Rheingau, where he has practised for ten years, he has never met with a similar case, nor does he find any recorded in the works of other authors. It is remarkable for the duration of the paroxysm and the apyrexia for eight times twenty-four-hours, and for the invasion of the new paroxysms on the ninth day.

Case. Mrs. M., aged 65, had suffered in her earlier years from an affection of the heart with asthmatic symptoms, for which she had frequently been bled. She was seized last June with inflammation of a cutaneous tumour on the left parietal bone, which had existed without inconvenience for fifteen years. She had previously complained for some weeks of pain in the epigastrium. Dr. Sturm, who saw her, found the tumour burst, and discharging some thick matter. While this was going on, and simple local treatment was being applied, the patient was suddenly one evening seized with rigors, followed by violent heat, and delirium. Greater turgidity was manifested in the head; and on the next day, there were fever, constant efforts to vomit, and pains in the limbs, during which there appeared a very red and glistening erysipelatous swelling, commencing at the left ear, and extending over the nape of the neck, the hairy part of the head, the forehead, and the entire left side of the face. The pains in the limbs then ceased, and the dry heat was replaced by a copious and universal sweat, which continued for three days, along with saturated but clear urine. At the same time, the erysipelatous swelling diminished, and disappeared on the fourth day without desquamation. The patient then felt tolerably well, with only some oppression about the head, much thirst, and an irregular pulse—which, however, she stated to be usual to her.

On the ninth day—reckoning that on which the rigors appeared as the first—she was again seized, after pain in the back and lassitude, with a slight rigor, followed by a more intense hot stage, with congestion of the head and delirium, so that she did not know where she was, nor recognise those standing around her. The symptoms declined much in the same manner as before

related. On the ninth day, the rigor again returned, but more severely ; and the urine in this attack, for the first time, deposited a reddish-yellow sediment. In the same manner, four other paroxysms occurred, notwithstanding the employment of sulphate of quinine, which, however, was given in too small doses.

Towards the end of the seventh attack, Dr. Bertrand was called in consultation. He could see no traces of erysipelas. There seemed to be no remarkable enlargement of the spleen. The pulse was irregular. He prescribed sulphate of quinine, to be taken in doses of ten or twelve grains, on the day before the expected return of the paroxysm. The attacks gradually diminished in intensity, still retaining the nine days' type ; and the patient recovered.

THE PARALYSIS WHICH SUPERVENES DURING CONVALESCENCE FROM PNEUMONIA.

In the *Bulletin Général de Thérapeutique* for December 30, 1850, Dr. Macario describes a form of Paralysis, which he has observed to occur during convalescence from acute pneumonia, and which he terms Pneumonic Paralysis. He relates two cases in illustration.

Case I. J. M., of Samerques (Cher), a day-labourer, aged 49, of nervous temperament and feeble constitution, badly lodged and fed, took cold in the beginning of February 1850 ; and, in a few days, he felt a violent stitch in the side, under the right breast. Two days after, on February 10th, Dr. Macario was called to him. There was crepitant rhonchus at the posterior and inferior part of the right lung, with slight dulness ; the sputa were viscid and sanguinolent, the tongue yellow, thirst severe, the breath of a peculiar odour, which Dr. M. has many times observed in pulmonary fluxes ; there was intense fever. He was bled largely, and an emetic was administered, which produced vomiting and bilious stools. He went on well for several days.

February 15. The patient had a relapse. The voice was hoarse, the respiration was quickened, and the tongue had a tendency to become dry. Sibilant rhonchus was heard in the posterior part of both lungs, especially the right, where there was also some sub-crepitant and humid rhonchus. The patient had perspired much during the night ; the pulse was 96. A large blister was applied over the right scapula, and a mixture of white oxide of antimony, which the patient had been taking, was continued.

February 18. The patient complained of great prostration : his voice was slow and very weak, and the cough continued. The sub-crepitant rhonchus at the posterior part of the right lung still continued.

February 19. The voice was still more feeble and broken, the tongue was red at the edges and white at the centre, and rather dry : the sub-crepitant rhonchus had extended, the sputa were yellow and thick, and the pulse 72.

February 23. The patient was convalescent, and commenced to take some nutritious food.

February 28. There was not the least trace of pulmonary affection. The blister had continued to suppurate abundantly ; the surface was covered with a white exudation. The patient also complained of lassitude in the legs, and of a creeping sensation in the soles and palms ; he also saw objects double.

March 6. The blistered surface had not healed, but rather kept increasing in extent. The weakness of the limbs had also increased, and the creeping sensation had extended up the legs as far as the groins, and up the arms as far as the shoulders.

April 26. The blistered surface, though less in extent, was still suppurating. The weakness of the limbs had gone on increasing from below upwards, and they were now heavy, and bent under the weight of the body. The patient

had walked with difficulty, for three weeks, with the aid of a stick; but the creeping sensations having extended over the whole of the limbs, and the muscular weakness having constantly increased, the patient was obliged to use crutches; and finally, in some days, was quite unable to walk. He could not move the lower limbs; and, when let go after being lifted, they fell as if dead, being completely paralysed. The arms, although so far weakened as to render him incapable of feeding himself, always, but in a vague and uncertain manner, obeyed the will. Sensibility was perfect; and there had never been any sensation of coldness in the paralysed limbs.

The patient remained in this state of muscular paralysis for about a month; until one night, towards the end of May, he felt a sensation of cold in the legs, so that he could not warm them; and, in the morning, he was able to move his feet a little. The improvement continued; and at the end of a fortnight he could get up, and walk alone. He soon recovered the complete use of his limbs; but the creeping sensations continued until the end of June, about a month after his recovery from the paralysis. This patient never had head-ache, nor any pains in the region of the spine.

Summary. This was a case of amyosthenia (paralysis of motion), occurring during convalescence from a severe attack of pneumonia. It commenced by simple muscular weakness, which at last successively attacked, *from below upwards*, the whole of the limbs. The paralysis was complete in the lower, incomplete in the upper limbs. The intellectual faculties were entire throughout; there was nothing peculiar in the state of the spinal cord. The paralysis was therefore entirely local, and presented some analogy to hysterical paralysis; and this circumstance rendered the prognosis favourable. The absence of symptoms referrible to the nervous centres, together with the transient diplopia which accompanied the onset of the affection, pointed to the purely functional nature of this new kind of paralysis.

Case II. B., aged 35, a weaver, was taken ill, with symptoms of pneumonia, on the 24th May 1850. We omit the daily reports of this case, observing merely that a friction sound, indicating pleurisy, was discovered on the 26th; that a large blister was applied to the right side of the back on the 31st; and that the patient went on favourably up to June 9th; the blister, however, still continuing to suppurate.

June 29. The blister still remained open. Five or six days ago the patient was seized, about 3 A.M., with an acute pain in the epigastric region, radiating to the right shoulder and arm, and soon disappearing spontaneously.

July 22. The blister had ceased to suppurate only a few days previously. The patient now complained of sore-throat; and for eight or ten days he had felt great and increasing weakness in the legs and arms. At this date, when he raised his arms, the hands remained flexed on the fore arms; the movements of these limbs were vague and uncertain, and, in spite of all his efforts, the patient could not raise them to his head. For two or three days he was unable to move. When the legs were lifted, and then let go, they dropped like dead bodies. Sensibility remained perfect. The appetite was tolerably good; but there was obstinate constipation. There was no pain in the head or spinal region. The intellect was unaffected. In spite of tonic regimen, and the use of iron, the paralysis increased rapidly; and the patient died on the 24th of July. No autopsy was permitted by the friends of the patient.

Summary. The two lungs were successively seized with inflammation, and on this supervened pleurisy of both sides. In spite of this formidable array of symptoms, a vigorous antiphlogistic treatment was crowned with unexpected success. The patient's appetite returned, and he was able to walk about; only he complained of great weakness in the arms and legs. He was supplied with some good wine to restore his strength; but the debility made rapid and deadly progress; and, at the moment when he was thought safe, he was seized with that paralysis which soon brought him to his grave.

Remarks on the Cases. Dr. Macario asks—what is this paralysis? What is its cause, its rationale, and its seat? Does it depend on an encephalic or on a local influence? Is its proximate cause to be sought in the exhaustion produced by the prolonged and abundant suppuration from the blistered surface? Can it be referred to the action of the brain and spinal cord? These are questions which it would be impossible to answer at present. There was nothing remarkable in the state of the nervous centres: and the author observes, that blisters sometimes go on discharging for as long a time, and as abundantly, without giving rise to paralysis. Besides, are blisters and cauteries, when kept open for years, ever followed by similar effects?

The paralysis appears to have had its seat in the nervous and muscular system of the affected limbs. There was, as has already been observed, an absence of symptoms referrible to the nervous centres; the intellect and volition remained entire; the *fourmillements*, and the muscular weakness, commenced at the palms and soles; that is to say, at the peripheral extremities of the nerves, and gradually proceeded upwards. Dr. Macario believes that, if he had made an autopsy of the fatal case, he would have found nothing to account for the paralysis and death.

In his concluding remarks, the author justly observes, that many cases must be collected before any conclusions are drawn as to the true nature of this affection.

HYDROCHLORATE OF LIME IN SKIN-DISEASES.

The Hydrochlorate of Lime, which exists in many mineral waters, is rarely employed in medicine. It is, however, a valuable remedy, and, according to M. Cazenave, may frequently be substituted for the iodide of potassium. It has moreover the advantage of being easily borne, and may be continued for some time. Biett used it in scrofulous lupus. For some time, M. Cazenave has used it very extensively, especially in cases which have exhibited a predominance of the lymphatic temperament. Thus, in chronic eczema, and especially in impetigo, he gives it in doses of two grammes a day. He gives the following formula: R. Crystallized hydrochlorate of lime, fifteen grammes; distilled water, five hundred grammes. A tablespoonful to be taken three or four times a day. [*Annales des Maladies de la Peau*, as quoted in *Bulletin Général de Thérapeutique*, 30th November, 1850.]

ACONITE IN PAPULAR ERUPTIONS (LICHEN AND PRURIGO).

M. Cazenave states, in the *Annales des Maladies de la Peau* for October 1850, that he has seen Biett employ Aconite with success in secondary syphilis, especially to mitigate the pains in the bones. Believing that a main indication in the treatment of papular affections of the skin is to combat the hyperæsthesia, M. Cazenave has successfully employed the extract of aconite, in daily quantities of from five to ten centigrammes (about three-quarters of a grain to one grain and a half.) Under this treatment, he has found the itching to diminish rapidly, and then to cease; and at the same time the eruptions have disappeared, which were kept up by the irresistible desire to scratch, and aggravated by the action of the nails.

He uses the following formula: R. Alcoholic extract of aconite and extract of taraxacum, of each one gramme (fifteen and a half grains); to be divided into forty pills. One or two to be taken morning and evening. [*Bulletin Général de Thérapeutique*, November 30, 1850.]

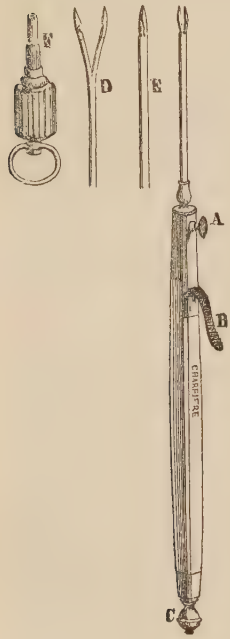
LEAD-COLIC.

Mr. Workman mentioned, at the Reading Pathological Society, a case of hæmoptysis, in which the exhibition of acetate of lead had been followed by severe colic and constipation for nine days, which was at last relieved by warm baths; and Dr. Wells alluded to a case of melæna, where the same effects had occurred. [*Prov. Med. and Sur. Journal*, December 1850.]

SURGERY.

REMOVAL OF FALSE MEMBRANES FROM THE EYE.

Mr. W. R. Wilde of Dublin has recently invented (and described in the *Medical Times*), a very simple and beautiful instrument for the removal of opaque capsules and false membranes from the chambers of the eye. The extraordinary toughness of these formations often renders their division very difficult, but the difficulty will be materially lessened by the ingenious contrivance before us; which is truly a valuable addition to the means and appliances of ophthalmic surgeons.



A strong spiral spring is attached to the end of a fine double canula, and passes through an ivory handle, to be fixed at the end by a ball nut C. B is a spring whereby the long canula is pressed forward through the short one, which is attached by the small screw A to a metal plate at the end of the handle. The part D consists of a fine steel stem, the end of which is cleft, and each extremity forms the blade of a fine pair of shears scarcely a line and a half long, and these, properly adjusted, cut with the greatest precision. When the instrument is used, the spring B being pressed by the middle finger, the long canula is projected through the collar, and the blades of the scissars close with a clipping motion. When B is relaxed, the canula is retracted by the coil, and the blades divaricate. When the canula is pressed forward, and the blades are closed, they form a needle-like point E. F is a key to fix and screw up the spring B.

Mr. Wilde recommends that an opening should first be made for the passage of the instrument, either with a flat needle or extraction knife.

OPERATIONS FOR STRANGULATED HERNIA IN OLD PERSONS.

Mr. W. H. Livett, of Wells, Somersetshire, has published in the *Medical Times* for January 4, 1851, two cases of operation for Strangulated Hernia in persons of advanced age. Both patients were females; one was aged 76, and had inguinal hernia; in the other, aged 79, the rupture was femoral. The after-treatment consisted in the cautious administration of moderate doses of castor-oil, and in the early use of a stimulant and nourishing diet.

Mr. Livett agrees with the opinion of Mr. T. B. Curling, expressed in his paper on the above subject in the London Journal of Medicine for June 1850, as to the advantage of nourishment, and even stimulants, at an early stage after operations for Strangulated Hernia in old people. He believes that when the operation is performed early, before the powers of life are much depressed by the symptoms of strangulation, and when our attention is directed rather to sustain enfeebled powers than to prevent inflammation, advanced age should not *per se* induce us to form an unfavourable prognosis in such cases, or lead us to hesitate in using the only means in our power to prolong life.

OBSTETRICS.

DR. JAMES REID ON PROLONGED UTERO-GESTATION.

The following is an abridgment of some observations made by Dr. James Reid, in an interesting essay on the Duration of Pregnancy in the Human Female, lately published in the *Lancet*. The part to which we more particularly refer is contained in that journal for July 20th, 1850.

Dr. Reid having, in the previous part of his essay, carefully examined some alleged instances of very prolonged gestation, concludes that " in the great majority of them there were cogent reasons on the part of the women for intentional deception, whilst, in the others, various sources of error have been pointed out, which probably led the patients to deceive themselves; and we cannot therefore allow such very exceptionable cases to weigh against the present experience of the whole medical profession. But we may still inquire whether the usually-received period of gestation may not occasionally be exceeded, to the extent of some days. In the Gardner Peerage case, five of the medical witnesses only were opposed to protracted gestation."

The two principal arguments which have been urged against the possibility of protracted gestation are, that " Nature is certain in all her laws," and that " this is evidenced *in the lower animals* in relation to the very point in question." In answer to the first objection, it may be replied, that the natural functions of the womb itself vary considerably in relation to time. The periods of menstruation, and the intervals between the periods, are by no means the same in females; the intervals, indeed, vary not only as to days, but in some individuals to the extent of one or two weeks.

The periods of dentition, of puberty, of decrepitude, are not immutable as to time; there is a general rule, but the exceptions are by no means unfrequent. The power of reproduction itself varies to a considerable extent.

The certain and definite period of gestation in the lower animals has been received as an axiom since the time of Aristotle. His assertion was implicitly relied on for centuries. A few writers, indeed, ventured to question the fact, but it was reserved for Tessier and Earl Spencer to prove, by extensive statistical tables, that the statement as to a fixed definite period for gestation in animals is totally opposed to facts; and the question as to this point may now be regarded as definitely settled. Tessier showed, that in 160 cows the average duration was nine months and ten days; and in mares eleven months and ten days. Of the 160 cows, 68 went beyond the 280th day; some of them to 290 days; 20 went on to 300, and 5 to 308 days. The same deviations occurred as to the term of gestation in mares. Lord Spencer published the result of 764 instances of the gestation of cows, in the *Journal of the Agricultural Society*, from which it appeared, that " the average term of gestation in cows is 285 days." Of the 764 cases, few exceeded that period by more than five or eight days; eight only exceeded it by more than twelve days, and one only went to the eighteenth day beyond. It has been shewn also that in the elephant, sow, bitch, cat, goat, sheep, &c., the usual period of gestation is occasionally exceeded by two or three weeks.

The following table (see next page) of the cases which have fallen under Dr. Reid's notice will serve to shew that the usual duration of pregnancy in woman is about 275 days, rather than 280.

It will be seen that there are well authenticated instances in which the period of gestation has been extended beyond the usual term. In the cases of *single intercourse*, 293 days form the longest period, or eighteen days beyond what Dr. Reid believes to be the usual average duration of pregnancy in the human female. In Lord Spencer's tables, the greatest excess beyond the average term of gestation in the cows (285 days) was also eighteen days. The cases of Dr. Ashwell and M. Velpeau may be considered as doubtful, being without sufficient dates.

DR. REID'S TABLE OF THE DURATION OF PREGNANCY IN THE HUMAN FEMALE.

No. of Case.	Last appearance of Catamenia.	Date of Connexion.	Confinement.	Period of gestation. Days.
1	—	July 27	April 30	276
2	March 14	Mar. 18 & 20	December 20	274
3	December 13	December 13[1]	September 13	274
4	November 6	November 18	August 20	275
5	November 7	November 12[2]	August 12	273
6	January 10	February 2[3]	October 31	271
7	—	November 15	August 16	274
8	—	October 18	July 19	274
9	June 15	July 1	April 5	278
10	—	August 5	April 25	263
11	August 4	August 6	May 13	280
12	August 9	August 11	May 2	264
13	—	October 29	July 30	274
14	November 7	November 18	August 21	276
15	—	October 8	July 9	274
16	—	April 6	January 7	276
17	August 15	August 18	May 25	280
18	July 17	July 22[4]	April 15	266
19	January 9	January 10	October 2.	265
20	—	February 11	November 3	266
21	May 14	May 14[5]	February 10	272
22	—	February 28[6]	November 30	275
23	—	February 9	November 6	271
24	March 5	March 12[7]	December 24	287
25	September 10	Sept. 15, 16, 17	July 5	292 or 293

Dr. Reid has also collected cases from other authors, in which the data were sufficiently determined.

No of Case.	Duration of Pregnancy.	Authors.
	Days.	
1	274	Dr. Girdwood, *Lancet*, December 1844.
2	280	Dr. Montgomery, *Signs and Symptoms of Pregnancy.*
3	260	Dr. Rigby, March 1846.
4	264	
5	276	
6	270	Dr. Lockwood, *American Journal*, December 1847.
7	272	
8	276	
9	284	
10	272	*American Journal of Medical Science*, April 1842.
11	283	Anderson *v.* Whitaker, 1827.
12	287	Dr. Lee, *Medical Gazette*, 1831.
13	273 or 287	Desormeaux, *Dict. de Med.*, vol. x.
14	286	Dr. Dewees.
15	291	Dr. Beatty, *Dublin Medical Journal.*
16	293	Mr. Skey. Case of Cæsarian operation.
17	293	Dr. McIlvain.
18	300	Dr. Ashwell.
19	310	Velpeau, *Art des Accouchements.*

[1] Quickened, April 6th.
[2] Sickness commenced, December 12th.
[3] Quickened, June 16th.
[4] Quickened, November 10th.
[5] Quickened in 19th week.
[6] Sickness commenced, April 14; quickened, July 6th.

With a view to ascertain the experience of those who were most likely to have paid particular attention to this subject, Dr. Reid applied to upwards of forty of our most eminent obstetric practitioners in London, Dublin, and Edinburgh. The large majority were firmly convinced of the occasional extension of the usual period a few days beyond 280. Several, like Dr. Reid, had met with one or two cases only of protracted gestation, out of many hundred, on the exact data of which they could rely. Others, who had not kept notes of their cases, could not positively speak to facts, but had no moral doubt as to the period being extended in some instances. Some, who had extensive experience in private and hospital practice, had never met with an undoubted case of protracted gestation; whilst two affirm that it is their strong conviction that no case ever exceeds the 280th from conception; and one, that it is never carried beyond the ninth calendar month.

DR. JAMES REID ON THE CALCULATION OF THE PERIOD OF EXPECTED PARTURITION, FROM THE LAST APPEARANCE OF THE MENSES.

In the essay above referred to, Dr. Reid makes some remarks on the above subject, of which the following is an abridgment.

Obstetric practitioners most frequently calculate the probable time of parturition from the last appearance of the menses. But in whatever method the calculation may be made, occasional circumstances will greatly interfere with this mode of calculation. 1. A discharge so exactly resembling the menses as not to be distinguished from them by the female, if not in reality identical, may occur every month regularly, as to time, quantity, and interval, during pregnancy. 2. The catamenia may be accidentally arrested by other causes than pregnancy for months, and even years, and impregnation may occur at any period during this stoppage. 3. This accidental stoppage may alone give origin to all the general symptoms of pregnancy, such as morning sickness, tumidity of the breasts, of the abdomen, etc.; and this combination of symptoms may be sufficient to convince the female, as well as her medical attendant, that she is pregnant, when in reality she is not so. Even the fœtal movements have been felt, and graphically described, when the existence of the infant was in the imagination only. Supposing this state to continue for nine months, that at the expiration of this time impregnation really did take place, and that gestation continued for its usual period, it would be difficult to convince the patient that she had not been pregnant during the whole eighteen months.

Again, a female whose catamenial period has always hitherto lasted for five or six days, finds that it is on some particular occasion arrested, after a slight appearance for one day only, or even for a few hours. She looks upon this unusual deviation as a token of pregnancy, regarding the discharge as accidental, and reckons from the period previous to it. At the end of the ensuing month, no appearance whatever is seen, and this confirms her in her original suspicion. Her parturition is expected at the end of nine months, dating from the last full period, but does not take place until nearly two months after this epoch; the explanation being, that impregnation did not occur until a day or two previous to the total stoppage of the expected menstrual discharge. The error may be still greater, should this scanty discharge have occurred more than once, and have been regarded, each time, as an accidental occurrence of the pregnant state. On the other hand, cases of pregnancy are met with, in which such an accidental monthly discharge has taken place for a few hours once or twice, and, from erroneously regarding it as a proper catamenial period, the child has been born much sooner than the anticipated time.

Dr. Reid distrusts, therefore, any exceptional cases of prolonged gestation, the principal datum of which is the last catamenial discharge.

He relates the following cases in illustration of his remarks :—

Mrs. E——, who had borne five children, had never hitherto had any stoppage of the menstrual function, except when pregnant. About ten months after the birth of her last child, which was at that time weaned, she missed a period, and naturally concluded that she was again *enceinte:* this opinion was confirmed by the second period also passing without any catamenial appearance. All the usual general symptoms of pregnancy occurred in succession, but, to her great surprise, she did not quicken as usual at the fourth month, and this occurrence did not take place until the supposed seventh month of her pregnancy. The infant was born exactly twelve calendar months after the last appearance of the menstrual function.

In this case there was evidently an accidental stoppage of the catamenia for three months, at which period conception took place. The apparently late period at which the movements of the fœtus were perceived, but which, in reality, was the usual one at four months, corroborates the above fact.

Mrs. C—— had all the usual symptoms of early pregnancy in May, with total suppression of the catamenia. In this case, also, much surprise was felt that no fœtal movements were perceived until December, and the lady was not delivered till May 20th.

The two cases adduced by Mr. Atlee, in the *American Journal of Medical Science*, as proving a twelvemonth's pregnancy, are to be explained in a similar manner. In one of these cases, the last appearance of the catamenia took place on August 6th, 1832, movements were felt (?) December 25th, but the patient was not delivered until August 13th, 1833 (372 days). In the second case, the last cessation occurred on March 22, 1832, quickening took place (?) on August 5th, and parturition on March 22nd, 1833 (365 days). It is added, that the movements of the fœtus were felt daily after the period of quickening, in both instances.

Dr. Reid has known several instances in which the catamenial appearance had not occurred for many months, and yet impregnation took place. In the Northern Dispensary, in May 1846, a very respectable woman applied for a lying-in letter, she then being advanced to the seventh month of pregnancy. She assured Dr. Reid that she had not had any menstrual appearance for the two previous years ; *i. e.*, since the birth of her last child, which had been weaned for more than a year. In another case, there had been no catamenial appearance for the last six years, during which period the patient had been either pregnant or suckling. Some women even appear to conceive more readily, when there is any accidental stoppage of the menstrual function. A lady who had been married some months without becoming pregnant, was alarmed, during the night, whilst the catamenia were on her, by a cry of fire. She ran out of the house, and remained standing with naked feet on a damp lawn, until the fire had subsided. The catamenia were suddenly checked ; this occurrence was regarded as the natural consequence of the cold, and was for some time treated as a simple case of amenorrhœa. It proved, however, that she must have become pregnant immediately after the accidental stoppage from cold, and the date of her confinement corroborated the fact. Two other similar instances have come under Dr. Reid's notice, in which pregnancy speedily followed an accidental and sudden check of the menstrual discharge by cold, although in both cases no pregnancy had occurred previously for some years. Zacchias states, that he attended a lady who was in general very regular as to her monthly periods, but who never became pregnant until she had passed three or four periods previously. In some rare exceptions a monthly uterine discharge has occurred *only* when the female was pregnant.

The following table is the result of 500 cases, in which the exact number of days intervening between the last day of menstruation and that of parturition is shewn. With the exception of about fifty, they were private cases, in which the data were most correctly kept ; and the others were selected

from upwards of 1000 hospital and dispensary cases, presenting an equal certainty as to date, in females superior to the usual class of hospital patients.

	Days.	Cases.				
37th week.	252	4	23			
	253	1				
	254	3				
	255	1				
	256	2				
	257	4				
	258	4				
	259	4				
38th week.	260	6	48			
	261	5				
	262	3				
	263	9				
	264	19				
	265	5				
	266	10				
39th week.	267	9	81			
	268	10				
	269	5				
	270	13				
	271	12				
	272	13				
	273	16				
40th week.	274	21	131			
	275	20				
	276	16				
	277	16				
	278	22				
	279	21				
	280	15				
41st week.	281	18	112			
	282	25				
	283	14				
	284	15				
	285	14				
	286	15				
	287	11				
42nd week.	288	17	63			
	289	8				
	290	9				
	291	14				
	292	6				
	293	3				
	294	6				
43rd week.	295	2	28			
	296	5				
	297	8				
	298	6				
	299	1				
	300	2				
	301	4				
44th week.	302	1	8			
	303	1				
	304	2				
	305	1				
	306	0				
	307	1				
	308	2				
45th week.	309	0	6			
	310	1				
	311	1				
	314	1				
	315	2				
	316	1				

Total, 500 cases.

In the case which occurred 314 days after the cessation of the catamenia, quickening did not happen until the sixth month; proving, in Dr. Reid's opinion, that conception had taken place later than had been thought. Had minute investigation been made, at an early period, into the remaining five cases, which went beyond the forty-fourth week, it is most likely that some similar facts might have been observed. The above table agrees with that of Dr. Merriman (114 cases) in showing that the greatest proportion of women complete the period of gestation in the fortieth week after the cessation of the catamenia, and a very considerable number in the forty-first week. In Dr. Murphy's table of 182 cases, the numbers born in the thirty-ninth and fortieth weeks were about equal, being twenty-four and twenty-five, whilst the greatest proportion (thirty-two) were in the forty-first week, and twenty-five in the forty-second week—equal to those in the fortieth. In Dr. Reid's tables the 282nd day was that on which the largest actual proportion of the patients were delivered; but the numbers from the 274th to the 282nd day run so near to each other that we must rather take that as the average period. If we allow of a range of from two to six days after menstruation, as elapsing probably before conception takes place, it will then appear that about the thirty-ninth week after impregnation is more probably the ordinary duration of pregnancy; and this will coincide with the results of the table taken from cases of single coïtus. [Abridged from *Lancet*, July 13, 1850.]

CASE OF "SCARLATINOID RASH" OCCURRING AFTER DELIVERY. DID AIR ENTER THE UTERINE VEINS?

Mr. Edward L. Falloon, of Liverpool, relates the following very interesting case in the *Medical Times* of January 18th, 1851. We agree with the author in thinking, that the red, or "Scarlatinoid Rash," which he saw, was in no way connected with the entrance of air into the circulation by the uterine veins. We are in some difficulty, however, as to the proper explanation of the case. Mr. Falloon writes as follows:—

"I was called, Nov. 20, at 1 o'clock, A.M., to attend Mrs. A., aged 26, with her second child. She had been complaining since 11 P.M.; pains increased;

head presenting, and pressing much on the linea of the os pubis, where she referred all her pain. At 2 o'clock, sudden fainting came on, with deadly pallor and cold extremities. On her rallying from this, by brandy, open windows, etc., the pains brisked up, and the uterus kept dilating, but was interrupted frequently by the faintness, which kept recurring without any external hæmorrhage, till 3 o'clock, when she had a fearful rigor. She rallied again, and became less faint, but complained loudly, and begged for chloroform, which I was ultimately obliged to give her, with great benefit, till her child was born at 5 o'clock A.M., without any unusual detention in the vulva, but *dead*. Immediately on its exit, the placenta followed, accompanied by an enormous clot, as large as, if not larger than the placenta ; the subsequent hæmorrhage was not excessive, but the faintness was extreme ; nevertheless the uterus contracted well. The shock of her child's death, added to her exhaustion, made her case very critical for some time (she had lost her first child from erysipelas) ; she looked blanched and anæmic to a high degree, but gradually improved. On the third day I was not a little alarmed and surprised to find her covered by a scarlatinoid rash, and the more so on being assured by her mother, then present, that she had had both scarlatina and measles. I had not met with this symptom before, and it was the more unaccountable from being unaccompanied by any appreciable fever ; pulse 96. I ordered a mild alterative and cooling aperient, and left very uneasy. On returning to my study, I happened to take up the *London Journal of Medicine* for October, and read that highly interesting and scientific article by Dr. Cormack, on 'The Entrance of Air into the Uterine Veins,' wherein he alludes to some cases occurring in the practice of Dr. Simpson, in which the same rash appeared three days after delivery, but *all* followed by death ; this made the matter more anxious for me by many degrees. Visiting early next morning, I found the patient improved ; the rash still out, but *paler ;* no febrile symptoms. I ordered a more generous diet, and it continued to disappear daily ; and she ultimately did well, and is now able to appear at her dinner-table, little more than a month since her confinement.

"It is evident this was a case of hæmorrhage in utero, prior to the rupture of the membranes, owing to detachment of the placenta, and the rigor. I suppose the evidence of the child's death ; but I am not in possession of any facts that throw light on the cause of this detachment, except that she had felt debilitated of late from a continuous attack of influenza.

"I am induced to publish this case by a remark I find in the ingenious article by Dr. Cormack, above alluded to, where he says, 'he notices his cases, in the hope that others will, when opportunities occur, make and record their observations.' I also refer to this phenomenon (the scarlatinoid rash) more with a view of adding a case to those already on record, than of proposing any theory regarding it. While I say this, I am not disposed to accept any of the theories at present propounded as at all satisfactorily accounting for this appearance ; nor do I acknowledge any analogy, so far as I am able to judge, between the 'reddish tinge' of Dr. Warren and the 'scarlatinoid rash' of Dr. Simpson ; the former appearing immediately after the evident entrance of air into the circulation, while the latter did not appear until two or three days after the shock of parturition, without any allusion to air having entered the uterine orifices. In my case, I think it is clear that no air entered ; the fainting commenced long before the membranes were ruptured, and faintness only remained after the birth of child and placenta ; besides, I had recourse to such mechanical support as made its entrance almost impossible. Nor do I see any analogy between a continuous, general, and gradually disappearing rash, as above stated, and the 'fitful suffusion of the face with a delicate blush, superseded quickly by extreme pallor.' To this latter I think Dr. Cormack's theory of 'capillary relaxation' admirably applies ; but, with all deference to such high authority, it does not satisfactorily account to my own mind for the former red

hue. If I might venture a theory on the subject myself, I would remark that I believe it to be connected with such a state of body as exists in low adynamic fever, or pure typhus, where there is a general lack of vital tone, depressed organic nervous system, and deteriorated circulating medium; all which were evident in Mrs. A's. case. The rash disappeared on adopting a generous diet and mildly tonic plan; in a word, it appeared analogous to petechiæ or purpura."

M. GUBLER ON ABSCESS OF THE UTERINE APPENDAGES, FOLLOWING THE COURSE OF THE ROUND LIGAMENT.

The *Union Médicale* for November 12th, 14th, and 16th, contains an interesting paper by M. Gubler, in which he relates several cases, in proof of the opinion advanced by Velpeau and Marchal de Calvi, that, in cases of suppuration in the broad ligament of the uterus, the pus may follow the course of the round ligament, and appear at the inguinal canal.

Case I. G., aged 29, primipara, was admitted into the Charity Hospital on 9th July 1846. At the ninth month of pregnancy, she had felt gradually increasing pain in the right side of the hypogastrium. Delivery was favourably accomplished; but the pain afterwards increased, and a fulness was perceived in the right groin, which became the seat of pricking and darting pains. On July 10th, there was no fever; the only additional symptom was a slight impediment to micturition. On examination, a swelling was discovered in the situation of the orifice of the inguinal canal. There was no change of colour in the skin; the percussion-sound was dull, and there was evident fluctuation. The swelling could be felt along the inguinal canal, becoming more and more deep, and disappearing at a point nearer to the anterior superior spine of the ilium than to the spine of the os pubis. In the abdomen, it was much enlarged, so that, on feeling it through the relaxed abdominal walls, its boundary could be easily determined. The projection and tension of the external tumour was increased on coughing; and the same effect was produced by pressing on the intra-abdominal portion of the tumour, or even on the inguinal prolongation. On the other hand, the size of the external projection could be temporarily greatly reduced, by pressure in the opposite direction. On the next day, the external tumour having attained the size of an egg, an incision was made, from which a large quantity of healthy inodorous pus escaped; and a linseed-meal poultice was applied. On the 18th, the patient quitted the hospital convalescent.

M. Gubler admits that, in this case, there is some doubt whether there had been an opening from an abdominal abscess through the posterior wall of the canal, or whether the pus followed throughout the course of the round ligament.

Case II. D. L., aged 26, was admitted into hospital on 6th July, 1848. She had been delivered of her fourth child on the 15th of May. On the third day, she complained of colic; and, after this left her, there was still pain in the loins, produced by the slightest movement. About the 12th of June, she felt a painful tension, and afterwards shooting pain, in the right side of the hypogastrium. She had ten leeches and a poultice applied, and kept her bed. Twelve days after, having found no improvement, she entered the hospital. On July 7th, there was found, towards the left iliac fossa, a rounded swelling, entirely distinct from the abdominal wall, and very painful on pressure. M. Cazeaux examined the uterus, and found nothing morbid in this organ. Febrile symptoms being prominent, M. Rayer had her bled from the arm, and a poultice applied over the abdomen. The patient appeared to go on well for some days, when the pain became more severe, and a flying blister was applied over the left side of the hypogastric region: this did not, however, diminish the pain, and the tumour went on increasing. The fever having increased, she was again bled; and this produced a notable

alleviation of the pain. On August 8, in consequence of an increase in the size of the tumour and of the pain, six leeches were applied above the flexure at the groin. No appreciable benefit resulted; and the following was her condition on August 15th.

The internal side of the left iliac fossa was occupied by a painful and resisting tumour, which reached nearly to the level of the anterior superior spine of the ilium, and extended towards the pelvis, where it seemed to be connected with the body of the uterus. Its upper part was felt, through the abdominal wall, to be rounded. The skin had undergone no change of colour; there was no œdematous puffiness, nor superficial tenderness; but sharp pain was elicited by a little firmer pressure. There were also darting pains towards the external genital region. On examination *per vaginam*, the body of the uterus was found enlarged on the left side, with diminished mobility, and puffiness of the cellular tissue. On the following days, the tumour projected more in the groin, and was the seat of deep fluctuation. It went on extending along the groin, and at length reached the external opening of the inguinal canal. The skin then assumed a rose-coloured tint, and the fluctuation became superficial. On the 28th August, the abscess was opened; and the direction of the purulent collection was ascertained by a sound, which passed upwards and outwards, as well as gradually deeper. The patient after this went on well, and was discharged cured on the 30th September. There could only be felt, as in the preceding case, a hard cord along the inguinal canal.

Case III. E. L., aged 23, was admitted, on the 31st December, into the Hôpital Necker, under M. Trousseau. She had been recently delivered of her first child. She entered the hospital in consequence of constipation, and severe pains accompanying each stool, and continuing for half an hour after. She was found to have two superficial fissures in the mucous membrane at the back of the anus. M. Trousseau prescribed rhatany enemata, from which she received benefit. She was then attacked with gradually increasing pains in the left side of the hypogastric region. On palpation through the abdominal walls, a tumour was felt, in the situation of the left ovary. The patient suffered much pain during this examination, which was, however, conducted with great care. Nothing was discovered on examination *per vaginam*. There was a quick and full pulse, and heat of skin. In spite of leeches, poultices, and mercurial ointment, the intra-pelvic tumour slowly increased, appearing on some days very tense and painful, with strong reaction, and at other times remaining stationary, with diminution of the febrile symptoms. These exacerbations and remissions occurred three or four times; and the swelling gradually reached the anterior abdominal wall, towards the end of January 1847. When the abscess pointed, it was opened, and 200 grammes (about ʒviss.) of fetid phlegmonous pus escaped. The flow of pus was affected by the respiratory movements. The patient was attacked with diarrhœa and hectic, which much reduced her; and she died on the 7th March, after having suffered for a week from choleriform symptoms—cyanosis, rice-water stools, cold breath, and vomiting.

Post-mortem Examination, thirty-eight hours after death. The inguinal abscess was ascertained to have its opening between the pillars of the external inguinal ring. The inguinal canal was traversed by a blackish cord, dissected out in nearly its whole extent, and evidently formed by the round ligament and the vessels, which had resisted the suppurative process. The walls of the canal were also coloured; and it contained a quantity of greenish pus. The inferior border of the internal oblique and transversalis muscles, which bound the canal superiorly, were also dissected out for a small extent, from the internal orifice, towards the posterior superior spine of the ilium. The fistulous passage, having reached the anterior wing of the broad ligament, became gradually narrower, and contained cellular filaments, which increased in quantity as its situation became deeper. It finally ended at the ovary, at

the level of a grey point, with an ulcerated centre, and softened edges, which corresponded with a purulent cyst as large as a small hazel-nut. In the left ovary, also, two additional cysts, of about the same size as the other, were found, which opened into each other so as to form a single bilocular cavity. They were all lined with a white false membrane, outside which there was a layer of blackish-grey tissue ; and beyond this was the healthy stroma of the ovary. The ovary was adherent to the Fallopian tube. The uterus was bound down towards the left side by shortening of the broad ligament ; its interior was greyish, and lined by a membrane of slight consistence. There was no false membrane in the peritoneum, and only a few drops of fluid.

The matter contained in the ovaries, and in the fistulous passage, was white and opaque, perfectly resembling very thick milk of lime. Under the microscope, it appeared as a transparent colourless liquid, holding in suspension very small strongly refractive granules, which, when isolated, exhibited Brownian movements. They were, however, often collected either into bodies resembling granular corpuscles, or into larger masses. There were also some pieces of a transparent colourless substance, probably fatty matter ; while the granules were probably inorganic, the result of the transformation of pus.

Remarks. M. Gubler has observed the phenomena which he describes only in puerperal women ; and it is in these that inflammation of the broad ligament is most frequent. In all three cases, suppuration in the ovary appeared to be the point of departure : the affection was always confined to one side. These cases present some particular symptoms, beyond those common to intra-pelvic phlegmonous tumours. First, there is an ill-defined deep projection, at the level of the abdominal orifice of the inguinal canal, gradually becoming more superficial, as it extends in the direction of the canal. At the same time, fluctuation becomes more distinct. At last the abscess points at the external opening. The whole abscess thus resembles a wallet ; there is an enlarged portion externally and internally (the latter being much the largest), and an intermediate neck, a sort of inter-parietal isthmus. The large size of the internal pouch explains the quantity of pus which flows, and the effect produced on the flow by respiration.

After operating, it is easy to pass a probe along the course of the abscess in the inguinal canal. It is at the external abdominal ring that the redness of the skin is most marked ; and it is there that the abscess must be opened, which should be done as soon as fluctuation is evident, so as to avoid the occurrence of greater mischief in the interior of the abdomen, or in its walls. The incision should be parallel with the inguinal fold, so as to avoid wounding the arteries which accompany the sub-pubic ligament, or which arise from the external pubic arteries, and generally follow that direction.

The pus is always phlegmonous and of good consistence : in one case only it had a disagreeable odour. Its quantity is very considerable for the first days after the abscess has been opened, but gradually diminishes, and, in favourable cases, soon disappears. In one case, the wound was cicatrised on the sixth day ; in the second, the cure was only obtained in a month ; in the third, the purulent exudation was much diminished two months after the operation, when the patient was carried off by an attack of sporadic, or rather symptomatic cholera. After recovery, there remains an engorged hard cord, following the course of the inguinal canal.

The impulse given by coughing would cause these cases to resemble hernia ; but the fluctuation and dulness on percussion furnish a means of diagnosis.

M. Gubler recommends the application of blisters at the situation of the external abdominal ring, to hasten the pointing of the abscess in this situation. The prognosis in these cases is favourable.

PSYCHOLOGY.

DR. COLDSTREAM ON THE ATTEMPTS RECENTLY MADE TO IMPROVE BY EDUCATION THE PHYSICAL AND MORAL CONDITION OF THE FATUOUS.

Until lately, all children affected with congenital idiocy were regarded as incurable. It appears, however, from experiments recently made in France, Switzerland, America, and England, that one-third of the children subjected to appropriate treatment have been in a few years so greatly improved, both in mind and body, as to be capable of conducting themselves with propriety, and taking part in the ordinary business of life.

Three years ago, an asylum for idiots was established at Highgate, near London. The popularity and necessity of this institution are alike proved by the fact, that in 1849 there were one hundred and seventy candidates for fifteen vacancies ; and it was forthwith resolved to erect large additional accommodation. A similar institution was founded at Bath, in 1846. So long ago as 1828, M. Ferrus, chief physician of the Asylum of the Bicêtre, Paris, organised a school for his idiotic patients, and caused them to be taught habits of order and industry, and to be instructed in reading, writing, arithmetic, and gymnastics ; and latterly, much attention has been devoted to the means likely to rouse and invigorate their dormant faculties. These means, as stated by Dr. Conolly, are simple, viz., suitable space, and local arrangements adapted to the conservation of the health and safety of the pupils, and to the establishment of cleanly habits,—to presenting them with objects for the exercise of their faculties of sense, motion, and intellect,—and to the promotion of good feelings, and of a cheerful active disposition.[1] Schools for the insane have also been successfully established in the Lancaster and Surrey County Asylums, and also at Hanwell.

Even cretinism (which must be regarded as idiocy in its most intense degree) has been successfully treated, within the last ten years, at the retreat on the Abendberg, in Switzerland, by the benevolent Dr. Guggenbühl ; and his example has been followed in Wurtemberg and Sardinia. Attention has also been strongly directed to the subject in the state of Massachusetts. Private schools for idiot children have been opened at Bendorf, not far from Coblentz, on the Rhine (by Dr. Erlenmeyer) ; and at Barre, in the state of Massachusetts. At the late meeting of the British Association in Edinburgh, it was agreed to memorialise the government in favour of a national survey, to determine the extent to which congenital idiocy exists throughout the kingdom at large, and the causes of its prevalence in particular districts. But we cannot admit that it is expedient to await the result of such a survey, though important, before making any effort to give some of our poor imbeciles the benefit of the knowledge we already possess.

The reports from the institutions already in operation are highly gratifying. At Highgate—"There is now order, obedience to authority, classification, improvement, and cheerful occupation. Every hour has its duties, and these duties are steadily fulfilled. They are, essentially, not only an improving, but a happy family. And all this is secured without the aid of correction or coercion. The principle which rules the house is love." The report from Bath is equally satisfactory. "The pupils are instructed, as their capabilities permit, in reading, writing, arithmetic, and geography ; and their acquaintance with external objects is extended and improved. Religious knowledge and moral culture are directly or indirectly kept in view in every pursuit. Corporal punishment is not permitted."

"The pupils in the school in Massachusetts, although only a year in train-

[1] Brit. and For. Med. Rev. vol. xix, p. 295.

ing,[1] had improved in personal appearance and habits, in general health, and in vigour and activity of body. Some of them could control their own appetites in a considerable degree; they sat at table with their teachers, and fed themselves decently. Almost all of them had improved in understanding, and in the use of speech. Some of them had made considerable progress in the knowledge of language; they could select words printed on slips of paper, and a few could read simple sentences. They had gained a knowledge of many objects, their names, colours, forms, dimensions, etc. "And thus," the intelligent reporter concludes, "it has been demonstrated, that idiots are capable of improvement, and they can be raised from a state of low degradation to a higher condition. How far they can be elevated, and to what extent they may be educated, can only be shewn by the experience of the future." [Abridged from *Edinburgh Monthly Journal of Medical Science*, November 1850.]

MATERIA MEDICA AND PHARMACY.

CHLOROFORM AND SULPHURIC ETHER.

Dr. J. D. Gross (*Transactions of the American Med. Ass.*) makes the following remarks. "In several of my cases, transient opisthotonos appeared to have been produced by the inhalation of chloroform. This phenomenon was strikingly displayed in a young gentleman of Covington, Ky., to whose hip I applied the actual cautery on account of coxalgia. While under the influence of chloroform, which he inhaled rather badly, his head was forcibly thrown backwards, and the body forwards, precisely as in opisthotonos. The effect did not last longer than fifteen or twenty seconds. No stiffness of the jaws was noticed. On two occasions, while performing the operation of lithotomy, the patients were affected with the most violent priapism, which, however, subsided, in each case, in less than half a minute. The ages of the patients were, respectively, four and twenty-two years. I may remark here that I never witnessed a similar result in any of my stone cases in which chloroform was not administered.

"Since I have commenced the use of chloroform, I have abandoned that of sulphuric ether altogether, being persuaded, from ample experience, that the former is, in every respect, preferable. It produces the desired effect in a much shorter time, causes less excitement of the brain, is more persistent in its action, and is more easily inhaled. In a word, I have every confidence in its efficacy and safety, and could hardly imagine a more desirable anæsthetic agent.

"Finally, my rule always is to bring the system gradually, not rapidly, under the influence of chloroform; an object which is usually attainable in thirty or forty seconds, provided the patient gives his thorough cooperation, and does not embarrass us by his obstinacy or timidity."

UNCERTAIN STRENGTH OF LONDON TINCTURE OF OPIUM.

Mr. A. Allchin has called attention to this subject. Tincture of opium, properly prepared according to the *London Pharmacopœia*, contains one grain of opium in nineteen minims. In seven specimens obtained from seven different London drug-shops, the strength varied from 19, 20, 21, and 22, to 26 and 28 minims, as the equivalent of one grain of opium. Perhaps these serious variations may arise from moist opium being used in place of the dry—from avoirdupois being used in place of troy weight—and also from the great difference which exists between different kinds and supplies of opium as obtained in the market. By drying, opium loses about twenty per cent.; and it is obvious that for this, allowance should be made when the moist drug is used.

[1] Second Report to the Senate of Massachusetts, on Training and Teaching Idiots, by S. Howe, M.D. 1850.

PRACTICAL REMARKS UPON IPECACUANHA, WITH A FORMULA FOR THE SYRUP.

By Edward Jenner Coxe, M.D.: New Orleans.

The value and efficacy of ipecacuanha, as an emetic or expectorant in many affections of the respiratory organs, more particularly of children, are too generally conceded and acted upon to require an extended notice.

In dysentery, ipecacuanha has been, and continues to be, much used. By Mosely, who held it in high repute, ipecacuanha was given in doses of half a drachm to two scruples; and by the late Professor B. S. Barton, it was regarded as almost a specific, particularly in cases of a typhoid character. In chronic diarrhœa, small doses of the powder, repeated several times a day, either alone, or preferably in conjunction with opium or Dover's powder, will be found of great value, and frequently, with strict attention to a proper regimen, will succeed in curing many most unpromising cases. In these last cases, when dependent upon, or connected with, derangement of the biliary secretion, additional power will be given to the above doses, by uniting with them two or three grains of blue mass, to be repeated every night for three or four nights, and subsequently every third or fourth night, as long as may be deemed requisite or advisable for the individual cases.

In hæmorrhage from the lungs or uterus, small doses of ipecacuanha, combined with sugar of lead and opium, are used with decided benefit. In hæmorrhage from the stomach, large doses of ipecacuanha have been strongly recommended, more particularly by Dr. Condie, who has published some valuable practical remarks upon the subject.

In the early stages of the bowel affections of children, no less than in adults, an emetic of ipecacuanha will often succeed in arresting the progress of the disease, and rarely fail to prove beneficial.

By combining from one-fourth to half a grain of ipecacuanha, with a minute portion of opium, and two or three grains of blue mass, the alterative properties of this last are materially enhanced. This method will be found of great benefit in most of the mild cases of biliary and bowel derangement so prevalent in this region, at different seasons of the year.

With the exception of that sudden and often fatal disease, croup or hives, there are perhaps none of the pectoral diseases of children, in which the syrup of ipecacuanha may not be resorted to with advantage; but in croup, no little experience, and an almost uniform success in its treatment, authorize the confident belief, that we possess no one remedy, or combination of remedies, comparable, or equal to the well-known Coxe's Hive Syrup, provided it be properly prepared. Dr. Good has remarked, that the ipecacuans concur in operating very generally upon the skin, at the same time that they excite the stomach, increasing, in a slight degree, the discharge of mucus from the lungs, and adding a little to the peristaltic motion of the bowels, while the antimonials act more violently upon the stomach, bowels, and skin, but less upon the mucous secernments.

Finding the process, for the syrup, recommended in the United States Dispensatory, attended with unnecessary trouble, and uncertain as to uniformity, I adopted, after many trials, the following formula,

R.—Ipecacuan. Rad. contus.	ʒ iv,
Aquæ	O. ij,
Sp. Vin. Rect.	ʒ x,
Sacch. Alb.	lbs. iij.

Macerate the bruised ipecacuanha in one pint of boiling water for twelve hours, then add the remainder of the water and alcohol, and continue the maceration for five or six days. Place the whole in a small displacement apparatus, returning the fluid that passes until it becomes perfectly clear, and then continue to pour a small quantity of water occasionally upon the surface, until two pints and ten ounces by measure shall have passed. Now add the

sugar, and with a gentle heat, evaporate until the syrup shall be of a proper consistence, readily ascertained by occasionally taking out a small portion and allowing it to cool. When of a proper consistence, pass it through a small quantity of fine tow placed in the tube of a funnel, to render the syrup clear and transparent. Three pints and ten ounces of syrup is the quantity obtained. It is, in strength, nearly double of that prepared by the usual formula ; and this I consider an additional recommendation. [From the *Western Lancet.*]

HYGIENICS.

WHAT DISEASES OF THE SKIN ARE INCOMPATIBLE WITH LACTATION?

This is a practical question of the highest interest ; and its solution has hitherto been far from satisfactory. The following is a summary of a memoir which M. Cazenave has published, on the subject, in the *Annales des Maladies de la Peau* for October and November 1850.

There is a great number of skin-diseases which, speaking absolutely, are not incompatible with lactation. Such are the non-specific eruptions, in the acute stage ; erythema, herpes, eczema, pemphigus, impetigo, ecthyma, having, in this stage, no other force than that of an accidental transitory inflammation, and exercising no appreciable influence either on the lacteal secretion, or on the health of the infant. Considered relatively, some of these diseases may, under certain circumstances, have peculiar effects. Thus acute eczema, if intense and general, may have the effect, through its general influence on secretion, of diminishing the quantity of milk. Impetigo, denoting a morbid exaggeration of the lymphatic temperament, may also be incompatible with lactation ; and so also may lichen and ecthyma. But, setting aside certain relative peculiarities, and certain individual circumstances, or organic relations between the nurse and the infant, which impress on these eruptions a character of relative severity, of which the value can only be ascertained by examining each case by itself, M. Cazenave thinks that, in general, most of these eruptions, when in the acute stage, cannot be considered as a reason for rejecting a woman as a wet-nurse, and still less for discontinuing the suckling of an infant by one in whom any of them has appeared during lactation.

As to these affections in the chronic stage, and as to those various forms of skin-diseases which are confounded under the name of *dartres*, M. Cazenave thinks that there is a large number which are compatible with the function of lactation, and of which the presence, either in the mother, or in the nurse, should not be considered a source of danger to the infant, nor a reason for changing its food. Any influence which these may, under certain conditions, exert on the infant, is only relative.

The cutaneous diseases which have a negative absolute value in the choice of a nurse, or which ought to become an obstacle to the continuation of lactation, belong to several categories. Eczema, impetigo, or lichen, may become incompatible with lactation, when in the chronic stage, and when their extent and intensity are more considerable than usual. But there are some diseases of the skin which of themselves, independently of all circumstances of duration or intensity, produce in general, though in different degrees, a complete change in the economy. And this change, although accidental and possibly only transient, is such as to impart to these eruptions, even in the acute state, an absolute value, as contra-indicatory of lactation. Such are chronic ecthyma, which always denotes a cachectic state of the constitution ; rupia, pemphigus and purpura, which likewise reveal a deterioration of the system.

There are, further, some diseases of the skin, which are very important in

the point of view which we are now considering, and which are characterised by degeneration of the tissues, and by their tendency to destroy the affected parts; such as the two forms of elephantiasis, molluscum, lupus, keloid, etc.

The contagious skin-diseases (itch and herpes tonsurans) cannot have any influence on lactation; but it is otherwise with favus, which is one of the most incompatible. There remains but one form of skin-disease—the syphilitic—which is directly transmissible by suckling, and consequently is the most incompatible of all.

Recapitulation. It is no longer allowable, in making choice of a nurse, to proscribe, in a general manner, the diseases of the skin known under the name of *dartres*. With regard to lactation, skin-diseases have different values, not only according to their nature, but also by reason of certain accidental conditions of individuality, extent, intensity, etc. The syphilitic affections alone should be excluded as virulent. Several cutaneous affections have a negative absolute value, as producing a generally severe modification of the organism: these are precisely the diseases farthest removed from those called *dartres*, and which do not properly constitute eruptions. The eruptions, properly so-called (*dartres*), are generally compatible with lactation. Some may accidentally lose this quality, by being of unusual intensity, or by transmitting a deterioration of the economy; but they are few in number. The eruptions which, in their nature and local conditions, are perfectly compatible with lactation, may cease to be so relatively, in consequence of certain peculiar relations between the nurse and the infant. [*Bulletin Général de Thérapeutique*, 15 December 1850.]

DISEASES ATTACKING PERSONS EMPLOYED IN THE MANUFACTURE OF SULPHATE OF QUININE.

At the meeting of the Academy of Sciences in Paris, on the 5th October, a memoir by M. Chevallier was read, on the health of the men employed in the preparation of sulphate of quinine, and on the means of preventing the diseases to which they are subject. The manufacture of sulphate of quinine has been carried on in France for thirty years, and has produced certain affections, which have not hitherto been studied. M. Chevallier's researches have led him to the following conclusions.

1. The workmen, employed in the manufacture of sulphate of quinine, are liable to be attacked by a cutaneous disease, which compels them to suspend their work for a fortnight, a month, or even more. 2. There are some workmen who cannot continue the work, and are obliged to quit the manufactories where they are employed. 3. M. Zimmer, manufacturer of sulphate of quinine at Frankfort, has observed that the men employed in the pulverisation of quinine in his manufactory, were attacked by a peculiar fever, which he calls cinchona fever (*china fieber*). 4. This fever has not been observed in France. 5. No means have, as yet, been discovered to prevent the cutaneous disease which affects those employed in the manufacture of sulphate of quinine. 6. This cutaneous disease attacks not only the men employed in different parts of the works, but also sometimes persons who are exposed to the emanations from the manufactories. 7. It attacks those workmen who are of sober habits, as well as the intemperate. 8. The existence of predisposing causes in the workmen is not demonstrated: but many believe that such exist.

For the prevention of the diseases referred to, M. Chevallier recommends that the manufactory should be in a well-ventilated situation, and that the workmen should expose as little as possible of the cutaneous surface either to the aqueous, or the alcoholic decoctions. He further suggests that it might be possible to destroy the emanations by the use of chlorine fumigations. [*L'Union Médicale*, Oct. 10, 1850.]

THE HOSPITALS OF LONDON. No. II.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

THE VITAL STATISTICS OF HOSPITALS.

Dr. Webster has recently directed the attention of the profession to this subject, by his paper in this Journal, which appeared in December last; and various criticisms and suggestions have likewise been elicited by that communication. The commencement of a new department in the London Journal of Medicine, devoted to the "Hospitals of London", is, we may add, bringing into our possession much valuable information on the same subject. In the meantime, we think, the publication of the following letter cannot fail to be of much use in giving a proper direction to the inquiries now making, or about to be made, by ourselves and others, into the vital statistics of the London Hospitals. We thank Dr. Rees for permission to print his valuable communication.

Letter to Drs. Cormack and Semple, *from* G. Owen Rees, M.D., F.R.S., *Fellow of the Royal College of Physicians, Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital.*

Gentlemen,—The subject of mortality in Hospitals, which has of late attracted the notice of the profession, will naturally occupy your attention. I am therefore anxious to bring before you a plan of return, which, were it generally adopted, would at once shew the fact of increased mortality in any particular hospital or hospitals, with a degree of accuracy such as I am not aware has yet been attempted. I cannot refrain from expressing regret that, while careful analysis of statistical returns supplies us with most valuable knowledge, it is still, unfortunately, too evident that this analysis is, even in the present day, occasionally neglected; and that returns, in themselves correct, are made instrumental to fallacious reasoning, and the promulgation of the grossest errors.

It will be well, perhaps, here to enumerate, in the first place, some of the causes for variation, which must affect hospital statistics, and invalidate returns referring to the total deaths per annum, in so far, at least, as they may be used *in comparing the mortality of one Hospital with another.*

1st. The mortality among physicians' cases is greater than among surgical cases; and hospitals do not contain the same proportions of these two classes of patients.

2ndly. The mortality among ophthalmic cases is scarcely any; and some of our General Hospitals (Guy's more especially) have always a certain number of ophthalmic cases in the wards.

3rdly. The mortality among obstetric cases may be regarded as probably less than that of medical cases generally; and hospitals contain this class of patients in varying proportion.

If the above statements be admitted, we ought then to place the deaths, medical, surgical, obstetric, and ophthalmic, in different categories.

Even with this arrangement, however, the number of deaths occurring during a year in each institution, and under each head, will shew us but little, if we place the *number of beds* devoted to each subject side by side with the mortality for each hospital, and for the following reason. The number of patients passing through different hospitals in any given time, bears no relation to the number of beds contained in each,—hospitals in which the *accommodation is equal* passing very *different numbers* of patients through their beds during the year. This difference is so marked, that in one case the excess, I know, amounted to more than one-third of the whole number passing through the hospital, the population of which had been the most stable.

In the table I append, you will perceive that this evil is obviated, by taking the number of patients under each heading passing through the hospitals during a year, and comparing the number with the total mortality for the same period. The derived column headed "Deaths per cent." will then give the correct comparison at a glance.

The mortality among children in General Hospitals may, I think, be safely taken at about the same as that among physicians' cases generally. Their number is not great in such institutions. It may also be well to mention, that patients will sometimes leave hospitals immediately before death, in order to die at home, either at their own desire or that of their friends. This, I believe, is not a very material point, so far as comparison is concerned, as it probably affects hospitals about equally upon the number of patients passing through them during the year. It would appear of the very greatest importance, to detect the difference in the mortality of hospitals. With correct information on this point, we can scarcely fail, not only eventually to detect the causes of evil, but we may perhaps also gain a knowledge of the *more specific influences* exercised by these causes, as they shew themselves in the various localities of the metropolis. I append the table which I would propose for these hospital returns, and have the honour to be,

Sirs, very obediently yours,

G. Owen Rees.

10, *Cork-street, Burlington-gardens,*
January 20th, 1851.

Name of Hospital.	Medical Cases.			Surgical Cases.			Obstetric Cases.			Ophthalmic Cases.		
	No. of cases in the year.	Actual Deaths.	Deaths per cent.	No. of cases in the year.	Actual Deaths.	Deaths per cent.	No. of cases in the year.	Actual Deaths.	Deaths per cent.	No. of cases in the year.	Actual Deaths.	Deaths per cent.

GUY'S HOSPITAL.

The following is the Medical Staff at Guy's; with the date of each officer's election.

Consulting Physician. Dr. Bright, *elected* 1824.

Physicians. Dr. Addison, *elected* 1824; Dr. Babington, *elected* 1838; Dr. Barlow, *elected* 1840.

Assistant Physicians. Dr. Hughes, *elected* 1840; Dr. Rees, *elected* 1843; Dr. Golding Bird, *elected* 1843.

Surgeons. Bransby B. Cooper, Esq., *elected* 1825; Edward Cock, Esq., *elected* 1838; John Hilton, Esq., *elected* 1845.

Assistant Surgeons. John Birkett, Esq., *elected* 1849; Alfred Poland, Esq., *elected* 1849.

Obstetric Physicians. Dr. Lever, *elected* 1844; Dr. Oldham, *elected* 1845.

Surgeon of the Eye Infirmary. John T. France, Esq., *elected* 1849.

Physician to the Lunatic Ward. Dr. Gull, *elected* 1847.

Resident Medical Officer. James Stocker, Esq., *elected* 1834.

Last month we gave a short account of the plan of clinical instruction in Guy's Hospital. We now subjoin some details of the general *matériel* of the school,—viz., its Museums, Library, Dissecting-room, etc.

The Museums of Human and Comparative Anatomy are on a scale which entitles them to rank among the first of our national collections. The late treasurer, Mr. Harrison, under whose auspices they arose, and have reached their present large development, has conferred a lasting obligation on our profession by the munificent manner in which he carried out his designs for the advancement of medical education ; and we may venture to say that, in the means of teaching, Guy's Hospital School is not second to any institution in this country. The present treasurer, Mr. Dobrée, has, since he has been at the head of affairs, done much towards the furtherance of the labours of his predecessor, by affording a more commodious building for the Comparative Museum, and by the erection of a new Dissecting-room.

The *Museum of Human Anatomy* is divided into an anatomical and a pathological department ; both of which are replete with numerous and illustrative examples, under the several subordinate divisions.

The anatomical department contains nearly two thousand different preparations of the organs and tissues. The principal contributors have been Dr. Hodgkin (who laboured at it for many years, and to whose talent and industry it is much indebted), Sir Astley Cooper, Mr. Key, Mr. Cock, and Mr. Hilton ; and, for the female organs of generation, Dr. Oldham.

This division of the museum deserves especial mention, from its containing a series of models of the different regions and organs, which stand unrivalled as works of art, and present one of the most complete and most minute representations of the body in existence. They have been executed within the walls of the institution, by Mr. Towne, from dissections made by Mr. Hilton, the lecturer on anatomy, who has been assisted during the last three years by Mr. Callaway. We would premise our remarks upon them by observing, that their intention is not to supersede the necessity for dissection by the student himself, as some have misapprehended. Nor indeed have they that effect ; but amongst other advantages which they possess, such as presenting at a view the ordinary relation of parts, etc., many of them are from dissections more elaborate than the general skill of a student could enable him to produce, during the usual period of his studies ; and others represent complex relations of parts, which could not be arrived at without many separate dissections, and a knowledge of which the student could not in many instances obtain without this assistance from art. Although their great beauty and delicacy of finish may be appreciated by the uninstructed, yet they can be adequately prized only by the anatomist, who sees in them an actual representation of all that his utmost perseverance could effect upon the recent tissues. It is but due to the talent which is here shewn, to draw attention to this distinction, particularly as their general merit as works of art is apt to cause their intrinsic and essential worth, namely, their truthfulness, to be overlooked.

The illustrations of the anatomy of the brain deserve especial praise. Of these there are thirty, exhibiting different sections of the organ in all its details. There are also thirty-nine, shewing its development from the earliest fœtal conditions, and a unique series of the convolutions in the principal varieties of the human race. The organs of sense have also been fully illustrated, especially the ear, the complex parts of which have been developed with exquisite skill, the relative proportions being maintained, and even the character of the textures preserved. The entire distribution of the nervous system is shewn ; and we may refer to the model shewing the branches of the fifth nerve and its connexions, as a master-piece, both of dissection and of modelling. To give a description of the whole would be to write an entire work on anatomy, for the nervous, muscular, circulatory, and absorbent systems have been each fully displayed.

The pathological department is divided into twelve sections. It contains four thousand eight hundred specimens, with two thousand drawings, representing the appearances in the recent structures. The drawings are arranged in a cabinet, so as to correspond to the different sections, which are as follows. I. Diseases of bone. II. Joints, ligaments, tendons, etc. III. Vascular system : Heart, arteries and absorbents. IV. Nervous system : Skin. V. Respiratory organs. VI. Digestive organs : Liver, spleen. VII. Urinary organs : Calculi. VIII. Female generative organs. IX. Male generative organs. X. Peritoneum. XI. Utero-gestation, malformations. XII. Parasites. In each section the specimens are arranged under—1st. Deficiency ; 2nd. Excess ; 3rd. Form ; 4th. Disordered nutrition, common inflammation, etc. ; 5th. Scrofula ; 6th. Malignant disease ; 7th. Parasites ; 8th. Injury.

The contributors have been numerous ; among the principal we may name Dr. Hodgkin, Sir A. Cooper, Mr. Key, Dr. Bright, Dr. Addison, Mr. King, and Mr. Bransby Cooper. The latter has recently made a valuable addition to the calculi, and rendered them more readily available to the student, by appending sketches to the section of each stone, so that the eye is at once directed to the different layers it contains. There are in all two hundred and seventy-eight specimens ; and with each there is given a chemical analysis, made by Dr. Golding Bird or Dr. G. O. Rees, and, of late, by Mr. Cooper himself.

This department has also been greatly enriched by a numerous series of models of diseases of the skin, which may with propriety be termed *clinical illustrations*. They form a valuable and unique contribution to this division of pathology. Amongst them are many rare, and some hitherto undescribed, forms of disease. They have been selected and classified by Dr. Addison, whose attention has been directed to this object, as opportunity afforded, during the last quarter of a century, and whose labours herein have proved him a worthy successor of Willan and Bateman, whose pupil he formerly was. They have been executed by Mr. Towne, who has here, as elsewhere, mastered the difficulties of his subject, and given a result which is truly wonderful.

Besides the preparations and drawings above named, there are 1,300 diagrams (or rather enlarged drawings), for the use of the lecturers on anatomy and physiology, surgery, and midwifery ; and 660 for comparative anatomy. There are also 330 pathological casts in plaster, shewing various deformities, dislocations, herniæ, etc.

The *Museum of Comparative Anatomy* occupies the left wing of the museum. It contains 2,550 specimens. The ground floor is principally occupied by skeletons, arranged in the Cuvierian order, from man downwards. The series is very complete, and contains many rare and valuable examples. In the galleries, the preparations of the normal organs are disposed in physiological sections, each of which is well illustrated : for example, of the nervous system there are nearly sixty dissections from the principal classes. The chief contributors have been Sir A. Cooper, Mr. Thomas Bell, Mr. Morgan, Mr. King, and the present lecturer on physiology, Dr. Gull.

The Museum of Materia Medica contains specimens of all the drugs and preparations in general use, under the different forms in which they are ordinarily met with in commerce, together with the principal adulterations. Dr. G. Bird has added a collection of the more rare *proximate principles*, which have a special interest in connexion with the recent advances in the chemistry of animal fluids. Although this department is not, from want of space, so commodiously arranged as might seem desirable, its usefulness for all practical purposes is proved by the fact, that the pupils from this school have, since 1842, obtained five exhibitions, and eight gold medals, at the University of London, on this subject. A plan for the construction of a laboratory for *practical* chemistry is under consideration, and will be carried into effect, so soon as a convenient spot for its erection can be determined upon.

The Library contains 3,224 volumes. It is supplied with three weekly, six monthly, and five quarterly journals of medicine, natural history, and philosophy; among which are the London Journal of Medicine, also the *Archives Générales de Médecine*, *Annales des Sciences Médicales*, *Müller's Archiv*, *The Philosophical and Linnean Transactions*, *Taylor's Scientific Memoirs*, etc. etc. It is open to students daily, from nine to five, without additional fees. As during the day there is but little leisure for reading, each student is permitted to take home one volume, which must be returned by ten o'clock the following morning, under penalty of a small fine, or loss of privilege for a week. It is the duty of the librarian to register the names of those who avail themselves of this privilege, together with the books taken.

The Dissecting Room is of recent construction, and has many arrangements deserving notice. The dimensions are—length forty-six feet, breadth twenty-four feet six inches, and height twenty-four feet. The ceiling is vaulted. It is lighted by a lantern, or sky-light, thirty feet by twelve feet, glazed with large sheets of rolled plate glass. The floor is of asphalte, which has the advantage of warmth, and does not imbibe moisture. The walls are lined to the height of seven feet with slabs of slate, which are for the delineation of extemporaneous diagrams. It is ventilated by twenty grated openings, ten near the floor, and ten in the ceiling, communicating with a main shaft at some distance from the building. The result is very satisfactory; for though no means are used for disinfection, the air is kept at all times pure. There is a large private room adjoining, for the demonstrators to receive their classes in, when demonstrating the different organs; and the washing-rooms, etc., for the convenience of students, are all that could be desired. We would recommend the dissecting-room at Guy's as a model for similar buildings.

LOCK HOSPITAL.

The following are the names of the gentlemen composing the Medical Staff of the Lock Hospital, with the dates of their election.

Consulting Physician. Dr. Sayer, *elected in* 1847.

Surgeons. E. Cutler, Esq. and Samuel Lane, Esq., *elected respectively in* 1840 *and* 1848.

Assistant-Surgeon. Henry Lee, Esq., *elected in* 1848.

The Lock Hospital, Harrow Road; the Chapel and Asylum, Westbourne Green, are thus briefly described by Mr. Peter Cunningham, in his *Handbook of London, Past and Present* (edition 1850, p. 295): "Supposed to be called '*Lock*' from the French *loques*, rags; from the rags (lint) applied to wounds and sores; so *lock* of wool, *lock* of hair. The hospital (the only one of the kind in London) was established in 1746, for the cure of females suffering from disorders contracted by a vicious course of life; the Chapel, in 1764, as a means of income to the hospital; and the Asylum in 1787, for the reception of penitent females recovered in the hospital. A subscription of three guineas annually entitles to one recommendation: 50*l.* as a donation, or 5*l.* 5*s.* annually, constitutes a governor. The Loke, or Lock, in Kent Street, Southwark (from which the present hospital derives its name), was a lazar-house, or 'spital for leprous people, from a very early period. There was a second betwixt Mile End and Stratford-le-Bow; a third at Kingsland, betwixt Shoreditch and Stoke Newington; and a fourth at Knightsbridge, near Hyde Park Corner. In one of these Locks, Bully Dawson died in 1699, aged 43. St. Giles'-in-the-Fields and St. James' Hospital in Westminster (now the Palace), were both instituted for the reception of lepers."

When the hospital was founded, in 1746, it occupied a building in Grosvenor-place. The lease having expired in 1842; and the ground being required for other purposes, it was removed to its present site. In the centenary report, printed in 1846, the following summary is given of the statistics of the institution. In perusing this table it is important to bear in mind "that no person is re-admitted, on any recommendation whatever, who has been discharged for irregularity, or has again received the infection"; and

we are likewise informed in the centenary report, that "the house is almost always full, and that it is often necessary to postpone proper objects for want of room."

Patients cured—From January 1747, to 25th March 1845 ...			55,230
In-Patients cured—25th March 1845. to 25th March 1846 ...		312	
Out-Patients cured	Ditto.....	170	
Eloped.....	Ditto.....	35	
Discharged for ill-behaviour.....	Ditto.....	16	
Died.....	Ditto.....	1	
In-Patients—25th March 1846.....		42	
Out-Patients—Ditto		43	
		——	619
		Total.....	55,849

In the report for 1850, it is stated that since the foundation of the hospital, 58,514 patients have been admitted and cured, and that during 1850, the number admitted and cured was 885.

We are astonished to observe the small amount of money which is collected. It is not only desirable that the miserable women who, sometimes from choice, but more frequently from necessity and to avoid starvation, are driven to prostitution, should have medical aid; but it is also most important, for the sake of the virtuous poor who go to general hospitals, that they should be kept separate, and afforded religious instruction and advice when under treatment. The following is the

Statement of Income and Expenditure for 1850.

Dr.	£.	s.	d.	Cr.	£.	s.	d.
To Balance 31st Dec. 1849 -	34	13	9¾	By Outstanding Debts of 1848 and 1849 paid off - -	885	13	0
Subscriptions - - - -	641	7	9	Loan Ditto - -	200	0	0
Donations - - - - -	432	16	3	Tradesmen's Bills 1850, *pt*	400	2	2
Legacy - - - - - -	100	0	0	Coals, Gas, etc. - - -	121	12	0
Sermons in Lock Chapel, and Chapel Boxes - -	161	1	9	Drugs (*part*) - - - -	39	19	0
Amount received by "special effort" of the Hon. A. Kinnaird - - - -	624	9	9	Expenses of Management	256	14	4
				Incidental Expenses - -	84	6	7¾
				In Treasurer's hand - -	6	2	2
	1994	9	3¾		1994	9	3¾

Liabilities outstanding 31st December 1850, about £680.

The present beautiful edifice was commenced in 1841. In April the necessary excavations commenced; and on the 29th of May, in the same year, his Royal Highness the late Duke of Cambridge—an efficient friend of this and other metropolitan charities—laid the foundation-stone, in presence of a large and distinguished assembly. The hospital furnishes accommodation for fifty male and fifty female patients. Some idea of the enormous expense which attends the erection and furnishing of a London hospital is afforded by the following account, which we extract from the third Report of the Building Committee, of date June 4th, 1842.

RECEIPTS.	£	EXPENDITURE.	£
Subscriptions - - - - - -	8,826	Purchase of Land - - - - -	4,790
Collection after a Sermon at Trinity Chapel, Conduit-street, by the Rev. H. H. Beamish - -	49	New Building - - - - - - -	7,462
£4000 reduced three per cent. annuities at 90 - - - - -	3,600	Laying out Ground - - - - -	205
	£12,475	Furniture and Fixtures - - -	600
Deficiency to be supplied - -	1,082	Incidental Expenses - - - -	500
	£13,557		£13,557

Deficiency - - - - -		£1,082
Estimate—Wings - -	£5,000	
Chapel - -	4,000	
		9,000
		£10,082

The Asylum was founded in 1787, in connexion with the old Lock Hospital, by the Rev. Thomas Scott, the pious and well known Bible commentator. In 1842 it was removed to its present site ; and in 1848-49 was enlarged to its present dimensions. When first founded, the asylum received only 16 inmates ; in 1842 it was enlarged, so as to receive 20 ; and now it is capable of containing 100. Since the foundation of the asylum, 1175 female patients of the hospital have been admitted—a majority of whom have been provided with situations, restored to their friends, or otherwise comfortably settled in life. At present there are generally about 45 in the asylum.

The accounts of the asylum are kept distinct from those of the hospital. The following is the official

Statement of Income and Expenditure for 1850.

Dr.	£.	s.	d.	Cr.	£.	s.	d.
To Balance 31st Dec. 1849	155	0	3	By Outstanding Building Debts of 1849 paid off	553	11	2
Subscriptions - - -	185	13	3	Tradesmen's Bills - -	362	19	9½
Donations - - - -	238	11	3	Coals, Gas, etc. - - -	84	14	3
Sermons in Chapel, and Chapel Boxes - - -	172	12	11	Expenses of Management - - - - -	128	1	4
Amount received for Work by Inmates -	383	11	6	Incidental Expenses -	52	7	6½
Interest on Stock - -	5	17	10	Balance in Treasurer's hands - - - - -	9	12	11
Legacy - - - - - -	50	0	0				
	1191	7	0		1191	7	0

Liabilities outstanding 31st December 1850, about £175.

A system of registration has been adopted at the Lock, which, if properly carried out, may afford much valuable information. The object of this system is to present in a condensed form the aggregate result of the cases received during the year. When each case is only taken in a separate form, the knowledge to be derived generally lies buried under a mass of unattractive detail, which few have either the time or the patience to wade through. But when the principal features of the cases are extracted and arranged in a tabular form, general results are strikingly displayed, and easily understood. We sincerely wish that the plan which has thus been commenced at the Lock hospital may in future years be carried out fully and accurately ; and we cannot help thinking that the same, or a somewhat similar system, might with advantage be adopted at other hospitals, and with reference to other diseases than the venereal. The inspection of the register, to which we have been kindly afforded access, while it shews that with a very little trouble much more might be accomplished than has hitherto been done, contributes valuable information.

Out of fifty-five cases of secondary syphilitic eruption, forty-six had never taken mercury properly for the primary disease. The history of the remaining nine cases is not given. In the forty-six cases, the previous treatment of which is recorded, we find that twenty-two had taken no mercury ; fifteen had taken it for a short period only ; and three had used it irregularly. In the remaining six cases, the effect of the mercury was either very slight, or excessive.

It is a very remarkable fact (already noticed in the London Journal of Medicine, vol. for 1849, p. 801), how very seldom it happens that cases of secondary syphilis present themselves at our London hospitals, where a properly regulated and sustained course of mercury has been employed in the treatment

of the primary disease. In almost all the cases in which that medicine has been used, and secondary symptoms have followed, it becomes very easy to point out the circumstances in the treatment which have prevented its legitimate action upon the system. When used without proper care, and without its effect upon the system being properly regulated and controlled, it not only fails to cure the disease, but actually leaves the patient in a worse state than if he had taken no medicine at all. The statistics which we have been able to collect upon this subject undoubtedly shew that a worse class of symptoms follow an ill-regulated course of mercury than where the disease is left to be combated by the unaided powers of the constitution. It may therefore become a serious question with those who are unwilling or unable to devote the requisite time and attention to a mercurial course, whether they had not better abstain from the use of mercurials altogether. But, on the other hand, where the remedy has been administered with due care and attention, the testimony we have appears greatly in its favour. Our tables of secondary disease show a comparative absence of cases in which a mild but sustained course of mercury has been used for the primary affection; and we therefore conclude that did circumstances permit, mercury might be so used in the treatment of this disease, as to reduce the number of those in whom any subsequent symptoms occur, to a few exceptional cases.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 14, 1851.

Samuel Solly, Esq., Vice-President, in the Chair.

Large Fibrous Tumour of Uterus. By R. R. Robinson, Esq. A tradesman's wife, aged 40, pregnant with her third child, four days before her confinement, slipped down four stairs, without feeling any inconvenience, and on the same day caught her foot against a chair, from which she felt pain in her left hip, which recurred at times subsequently. She was confined at four o'clock in the afternoon; the labour was in every respect natural. The placenta was thrown off by uterine effort in a short time; the uterus contracted well, and there was no hæmorrhage. About two hours afterwards, she was seized with cold chills, and, upon being put to bed, was sick and faint. Mr. Robinson saw her five hours and a half after her confinement, and found her in a state of complete collapse. Fearing there was internal uterine hæmorrhage, and not feeling certain about the state of the uterus, he introduced his hand, and found that organ flaccid, but free from blood. By cold and pressure, and by keeping the hand some little time in the uterus, contraction of a feeble kind was produced, and also a somewhat improved condition of the system generally. She rallied a little, but never fairly got out of collapse; she lived ten days, and died apparently from atonic peritonitis. Upon dissection, twenty-four hours after death, the intestinal convolutions were of dark colour, being smeared with blood, and were united to each other and to the uterus, by recent and easily-separable adhesions. There were three pints of dark venous blood, without coagula, in the peritonæum. The tumour was covered with peritonæum, an elongation from the uterus, and this, at the angle of reflexion, was lacerated to the extent of two inches. Mr. Robinson was of opinion that the tumour had augmented much during the growth of the uterus, and that, in consequence of being entangled with the intestines, did not move so readily when the uterus contracted, as the uterus, and thus the peritonæum, being put upon the stretch by recurrence of pain, gave way.

Cases of Ruptured Liver, Lung, etc. By Athol Johnson, Esq. The author related five cases. In four of these, death occurred either directly

from the injury to the internal organs, or from injury to the spine, at intervals varying from two or three days to three weeks. In one case, in which the patient lived for three weeks, dying then from injury to the spine, the liver, which had been extensively lacerated, was found to have nearly united. In another case there was strong reason to believe the liver had been ruptured, but the patient recovered, and of course this point could not be demonstrated. The patient, however, a little girl, was admitted into St. George's Hospital, in consequence of having been run over by a cart, which passed over her belly. She was in great pain in the abdomen ; much collapsed ; and the face was pale and exsanguined. She, however, recovered. The five cases had occurred in one year, during which the author had been house-surgeon to St. George's Hospital. The prognosis, in those cases where the injury was great, was unfavourable ; but where it was moderate, recovery might take place. In one of the cases detailed, the patient, after living three weeks, died from the spinal injury ; the liver and kidney, which had been lacerated, being found, on examination, to be nearly united. This showed the power of reparation in such cases. With respect to treatment, the author refrained from the use of brandy and stimulants, in the stage of collapse, because they would tend to the production of further hæmorrhage : the patients were to be kept quiet, and not allowed to make any exertion whatever ; the bowels were not to be disturbed by purgatives for two or three days, and full opiates were to be given. The necessity of quiet was much insisted upon, as in two of the cases detailed the patients had died suddenly, from change of posture in getting out of bed.

MISCELLANEOUS INTELLIGENCE.

Clinical Medicine and the Society of Apothecaries. We are happy to give insertion to the following correspondence between Dr. Nelson, the Professor of Clinical Medicine in Queen's College, Birmingham, and the Court of Examiners of the Society of Apothecaries.

To H. Blatch, Esq., *Secretary to the Society of Apothecaries.*

Queen's College, Birmingham, Dec. 12, 1850.

Dear Sir,—Will you oblige me by giving me some clear and settled idea on the following subject. Your Society's rules, as exhibited in the Student's Number of the *Lancet* (Sept. 28, 1850), declare very distinctly, that each student who commenced his studies on or after Oct. 1, 1849, must produce, before his examination, certificates of having attended a summer course of lectures in clinical medicine during his second year, and a winter course during his third. Physicians of hospitals, according to duty, are naturally desirous of doing all in their power for pupils ; at the same time, it must be confessed that their lectures are seldom attended by the body of clinical students. Now, this is found to be due to an existing impression, both among students, and some professors, that the certificates of such attendance, though stated as necessary in your printed rules, are not *imperative* or *essential*, but simply *formal*. I quite coincide with the important view which your board attaches to clinical instruction ; but should like to be assured, on undoubted authority, that the rules laid down in this respect are really meant to be carried out, and that the Court intend to second the efforts of clinical professors by looking as much to their certificates as to those of others. So far as I can learn, similar impressions seem to exist amongst the students of other English schools ; and therefore the board, in their accustomed zeal for improving medical education, might, perhaps, with advantage, take some means of making their sentiments decidedly understood throughout the country. The clinical professors have no pecuniary interest in this matter, as all is included in the hospital fees, and therefore, while endeavouring to excite some zeal for practical study, they only desire the real welfare of their students. That much ardour, to a certain extent,

does exist here, is proved by the fact of twelve gentlemen having put down their names, voluntarily, for examination by me; but I do think it only just to such as entertain the above impression, that the rule should be clearly understood; as, in the event of any such impression being continued, and proving erroneous, they might, at the end of their three or four years of study, and just, perhaps, as they looked forward to some immediate appointment, find themselves in a very awkward and unexpected relation to your board, such as might damage their worldly prospects through life.

I am, dear Sir, your faithful servant,

D. Nelson, M.D. Edin.,
Physician to the Queen's Hospital, and Professor of Clinical Medicine.

To Dr. D. Nelson, *Queen's College, Birmingham.*

Dear Sir,—The Court of Examiners of the Society of Apothecaries have directed me to forward to you the following reply to your letter of the 12th inst.:

That the Court of Examiners do not desire to limit, or to define the plan to be pursued by the physicians of hospitals in delivering clinical instruction to their pupils; but the Court wish that it may be distinctly understood that they consider such instruction as imperatively necessary, and that attendance upon it should be enforced in such a manner as the physicians may think expedient.

The Court, in proof of their desire to encourage a regular and definite system of clinical instruction, beg to refer to the last copy of their regulations, p. 10, wherein it is stated that a certificate of attendance upon a course of not less than seventy-five lectures on clinical medicine, delivered by a distinct professor, will be received in place of the second course upon the theory and practice of medicine.

But, as some of the schools are not yet provided with distinct professors of clinical medicine, the court at present leave the mode of clinical instruction to be arranged by the physicians; but they repeat that they consider such instruction to be *imperative* in all the schools, and that the part of the schedule appropriated to clinical lectures should be filled up only after a *bonâ fide* attendance, as in the case of the other lectures.

I remain, dear Sir, etc.,

Dec. 27, 1850. Henry Blatch.

Notwithstanding the innumerable facilities which are offered in this metropolis to the pursuit of medicine as a practical science, it is lamentable to observe the general neglect of clinical instruction on the part of both teachers and students. We fear that a systematic plan of clinical medicine is adopted at very few of our great hospitals; and we shall be rejoiced if the efforts of the Examining Boards should have the effect of bringing this important subject more fully under the notice of those, to whom are entrusted the management of the sick and the education of the students. With much zeal, and most praiseworthy energy on the part of many of the teachers, we fear, that even when clinical lectures are regularly delivered, the object and purpose of clinical teaching are too often misunderstood. It is too often the fashion to fill clinical lectures with the accounts of rare and severe operations, and with disquisitions upon the history of unusual or obscure diseases, while but little pains are taken to impress upon the minds of the students the leading features of the pathology and treatment of those common forms of disease, which will fall to the lot of every practitioner to treat in his professional career. To prepare an elaborate lecture upon one particular case of disease requires a great expenditure of time and of research, and the result, after all, may not be practically useful; while a lecture delivered extemporaneously upon such of the cases, whether common or otherwise, as may present themselves during the physician's or surgeon's visit,

requires but little preliminary labour on the part of the well-informed teacher, and is attended with a far more practically useful result to the hearer. A common ulcer, or a simple pleurisy, may form an appropriate text on which the clinical professor may build a discourse pregnant with instruction to his pupils; and if it be said that such cases are of common and every-day occurrence, we reply, that that is the very reason why they should be frequently dwelt upon. The subject of clinical teaching is too extensive to allow us to enter into it at large upon the present occasion, but we shall return to it at a future opportunity.

Treatment of Union Surgeons by Poor-Law Guardians. An inquest was lately held at Heywood, on the body of Edmund Wild, aged 71, who died in the Bury workhouse. He had fractured the thigh-bone, and, after being admitted into the workhouse, died while under the care of Mr. Hinxman, one of the surgeons, from the effects of a bed-sore, the Board of Guardians having resolutely refused to supply either a water-bed or one of Hooper's cushions. At the inquest, the clerk to the Board said that the man died from injudicious treatment by the surgeon. The jury, however, in their verdict, censured the Guardians for want of proper attention to the deceased, in not forwarding such means as, in the opinion of the medical officers, were considered essential for obviating his disease, or endeavouring to make it less painful or fatal. An analogous case has also occurred at Southampton, in which the Guardians sought to fix blame on the medical attendant, on the ground that he had not detected a disease of the kidneys, which was discovered after death. The woman had been reported as suffering from disease of the liver; and had been refused out-door relief. The jury passed a vote of censure on the Guardians.

Honours conferred on Dr. De Carro, the disciple and friend of Dr. Edward Jenner. The Emperor of Austria has lately conferred the golden cross of the order of Civil Merit on the Chevalier Jean De Carro, M.D. (born at Geneva in 1770), the friend and apostle of Edward Jenner. After the ceremony, a banquet was given in honour of Dr. De Carro by M. Knoll, burgomaster of Carlsbad in Bohemia, where Dr. De Carro resides. During the evening, a collection was made for some poor families of the place. [Abridged from *Lancet*, Jan. 18th; and *Daily News*, Jan. 14th.]

The late Robert Liston, Esq. The Queen has lately granted a pension, of 100*l.* per annum, to the widow of the late Robert Liston, the eminent surgeon.

Testimonial to Dr. Paul of Elgin. Dr. Paul, of Elgin, a gentleman known to the profession by several original publications, and as an eminent practitioner for the last thirty years, has been lately requested to sit for his portrait, which, when finished, was presented to his family by a deputation composed of the magistrates and clergy of the town, as the spontaneous expression of gratitude for professional services, and respect for his long-tried character and conduct.

Adulterations of Articles of Food. The *Lancet* has commenced a series of valuable articles on the adulterations to which various substances, used as food, are subjected. The subjects which have been already noticed are coffee (January 4th) and sugar (January 18th and 25th). The microscopic and chemical characters, both of the pure substances, and of the adulterations and impurities are detailed, and illustrated by woodcuts; and the results of the examination of various specimens, procured from the shops, are given in detail. Great credit is due to the editors of the *Lancet* for the publication of the reports of their "Analytical Sanitary Commission". We heartily wish that their success, in promoting the dietetic welfare of the community, may be commensurate with the labour which they are bestowing on the subject.

Bequests to Hospitals. The late Thomas Ansaldo Hewson, Esq., has bequeathed the sum of 1000*l.* to University College Hospital, and 500*l.* to King's College Hospital. The late Mr. Bethune Morrison, of Naughten, Scotland, has left 500*l.* to the Dundee Royal Infirmary, and 200*l.* to the Dundee Lunatic Asylum. The executors of the late Colonel Cheape, of Girgenti, have paid 1500*l.* to each of five Infirmaries in Scotland.

Quintuple Birth. The *Deutsche Klinik* for November 23 states, that on the night of the 11th of that month, a peasant's wife, at Alt-Rehfeld, was safely delivered of five living male children. One lived three hours, another twelve; the other three survived. The mother was doing well.

APPOINTMENTS.

Bond, Dr. H. J. H., appointed Regius Professor of Medicine in the University of Cambridge, in the room of the late Dr. Haviland.
Childs, G. Borlase, Esq., elected Surgeon to the Metropolitan Free Hospital.
Pidduck, Dr. Isaac, elected Physician to the Bloomsbury Dispensary.
Ramskill, Dr. J. S., elected Physician to the Metropolitan Free Hospital.
Richardson, Dr. W., elected Physician to the Metropolitan Free Hospital.
Sandie, Dr. J. G., elected Physician to the Liverpool Dispensary.

OBITUARY.

Bailey, Dr., in Jamaica, of cholera, lately.
Brown, Dr. John, at Boston, aged 51, from suicide by prussic acid, on Jan. 9th.
Brownson, Dr. W. H., late Surgeon to Her Majesty's 2nd West India Regiment, at Brompton, aged 37, on 21st December.
Chambers, Dr. John, in Jamaica, of fever, lately.
Crichton, Dr. H. P., in Jamaica, of cholera, lately.
Duncan, John W., Esq., Assistant-Surgeon R.N.
Ewart, Dr. John, in Jamaica, of fever, lately.
Fishbourne, Dr. T. M., in Jamaica, of fever, lately.
Froom, T. N,, Esq., at Dunsford, near Exeter, aged 35, on 6th December.
Haviland, Dr. John, thirty-three years Regius Professor of Medicine in the University of Cambridge, aged 65, on 8th January.
Hickman, William, Esq., at Great Marlow, Bucks, aged 94, on 24th December.
Leuret, M., late Physician to the Bicêtre, Paris, at Nancy, lately.
Link, Professor, at Berlin, lately. He was celebrated as a botanist, and a writer on Natural Philosophy and Science.
Lucas, Dr., Assistant-Surgeon, 61st Foot, at Peshawŭr, in October last.
Macfadyen, Mr., in Jamica, of cholera, lately.
McDermott, Dr. C., in Jamaica, of cholera, lately.
Miles, Dr. John, at Bukee, aged 77, on 14th December.
Murcott, Dr., in Jamaica, of cholera, lately.
Palmer, Dr. A., in Jamaica, of cholera, lately.
Philip, John, Esq., Assistant-Physician R.N., at Edinburgh, on 13th December.
Scale, Dr. John D., at 7, Taunton Place, Regent's Park, of pneumonia, aged 36, on 21st December.
Scriven, Dr. G. A., at Deptford, from suicide by oxalic acid, aged 34, on Dec. 25th.
Squair, Dr. John, late Surgeon 8th Hussars, at Portobello, on 14th December.
Tabois, Dr., in Jamaica, of cholera, lately.
Tait, Dr., in Jamaica, of cholera, lately.
Wood, Dr. J. R., late of Glasgow, at 19, George Street, London, on 25th December

BOOKS RECEIVED.

Fleming (Dr. Alexander) Introductory Address on Medical Education. Dublin: 1850. Monro on Insanity. Part II. London: 1850. Pharmacopœia Nosocomii Morborum Cutaneorum. Londini: 1850. Radcliffe on Vital Motion. London: 1851. Report (Eleventh Annual) of the Crichton Asylum. Dumfries: 1850. Wegg on the Science and Art of Medicine. London: 1851. Wilson's Anatomist's Vade Mecum. Fifth Edition. London: 1851.

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ORIGINAL COMMUNICATIONS.

ON THE PHYSICAL EXAMINATION OF THE ABDOMEN, IN HEALTH AND DISEASE.

By CHARLES J. B. WILLIAMS, M.D., F.R.S.

(Continued from page 97 of last Number.)

EXAMINATION OF THE ABDOMEN BY PALPATION.

[The following introduction to the subject of "Palpation" was inadvertently omitted at the commencement of the paper in the number for February.

Like the sight, the touch acquaints us with the form, size, and movements of objects; but it further instructs us with regard to their temperature, surface-feel, consistence, resistance, and weight; and in the case of soft, pliable, and yielding objects, such as the abdomen, the touch reaches beyond the surface, and may feel more or less of all the same properties in the deeper-seated parts. Thus by *palpation*, or *handling*, of the abdomen, we may learn far more than sight can teach us, of the physical properties, and therefore of the healthy or morbid condition, of its internal organs; and the more carefully we analyze these physical properties, and understand their relations to the parts which possess them, the more instructive will be the knowledge which we derive from them.

As to the sight, so also to the touch, the abdomen is made up of its walls and the viscera within them; and the latter being felt through the medium of the former, will be more or less distinct, according to the condition of the abdominal walls. When these are very thick or tense, it may be difficult to feel anything through them: when they are thin, and more especially when they are also flaccid, the condition of the contained parts may be determined with great nicety. The thickness of the walls depends chiefly on the quantity of fat, and where this is very great, palpation can only afford obscure results; the touch must be applied with considerable pressure, to reach beyond this superficial mass. The tension of the walls depends on the tonic contraction

of the abdominal muscles, often increased by voluntary restraint, under the apprehension of pain, or from nervousness; and it may greatly interfere with the examination by rendering the walls too hard to permit anything to be felt through them: but this muscular rigidity may generally be reduced by calming the patient's fears, and by diverting the attention from the region by questions on some other interesting topic regarding the health, whilst the hand is kept applied with a gentle pressure, and softly rubbed over the surface of the abdomen, until the muscles become relaxed, and the examination is properly effected.]

The palpable signs of *air in the peritoneum* are very characteristic. The usual moderately elastic softness of the abdomen is replaced by a tympanitic elasticity, remarkable for its resilient feel, and even on superficial pressure yielding the same light and springy resistance. Effused as air usually is suddenly in consequence of perforation of the alimentary canal, its phenomena may be much masked by the intense pain and other symptoms of severe disturbance which usually accompany that accident, and which, by spasmodic contraction of the abdominal muscles, render palpation difficult. In the absence of such symptoms, which are in themselves pretty significant, the physical diagnosis is easy, as in the following case.

A woman, 50 years of age, was admitted under my care for disease of the abdomen, which I considered malignant. The liver was much enlarged, with nodulated inequalities, and was an object of palpation at every visit. One day, before asking a question, or hearing the daily report, one touch of the epigastrium drew from me the exclamation—"Here's air in the peritoneum!" The region which before had presented the hard uneven resistance of the diseased liver, now felt soft, very elastic, and uniform on its very surface; like, in fact, a thin vulcanized India-rubber air-cushion moderately distended. The peculiarity of the feel, contrasted with the previous condition of the abdomen, made me sure that nothing but an extravasation of air could account for the change; and on further examination, the superficial tympanic sound, with metallic echo on percussion, and the gurgling near the surface at the sides, where liquid mixed with the air, confirmed the first impression. The patient had suffered more than usual pain, but was now easy, and her countenance calm, under an opiate; the pulse was, however, very rapid and thready, and the feet and legs becoming cold. She died in about twelve hours. The air was found in the peritoneum as indicated, occupying the whole front of the abdomen; the liver was large, and studded with cancerous tubera: lying underneath, and attached to it, was a cancerous mass involving the pylorus, duodenum, and transverse colon. The perforation was in the duodenum.

As peritoneal tympany, or pneumo-peritoneum, occurs only in case of perforation of the alimentary canal, its palpable signs as just described, and those of superficial tympanic stroke-sound with metallic tinkling, to be noticed hereafter, become evidences of the occurrence of that mortal accident. But perforation may occur without the extravasation of sufficient air to produce the signs; their absence, therefore, will not disprove the existence of perforation. In the formation

of limited fistulæ in the peritoneum and walls of the abdomen communicating with the intestines, the superficial gurgling or croaking under the pressure of the fingers is a very palpable sign; I have met with it in more than one case. It is more distinct and superficial than the gurgling of reducible herniæ.

PALPABLE SIGNS OF SOLID INDURATIONS AND ENLARGEMENTS IN THE ABDOMEN.

Solid bodies of flattened shape are sometimes met with in the walls of the abdomen, underneath the integuments, or between the abdominal muscles and peritoneum. In the former situation, they can be felt to move freely on the muscles, even when these are tightened. When attached to the abdominal peritoneum, they may be felt to remain fixed during the movements of respiration, which would carry them a little upwards and downwards, were they connected with the abdominal viscera. In making observations on these movements, the umbilicus, linea alba, or some other conspicuous object on the walls, will assist the eye or the hand in seeing and feeling what is attached to the walls, and what moves with the viscera underneath. Indurated patches in the situations now alluded to, I have known both of a cacoplastic or low exudatory, and of a malignant kind; the latter being commonly distinguished by its penetrating through several textures, and often presenting nodular irregularities.

Laminar indurations of the omentum, or intestinal peritoneum, may be felt by careful palpation when the walls are relaxed, practised both perpendicularly, and from side to side. Gentle perpendicular pressure detects the greater resistance offered by the induration, as compared with adjoining spots; but delicate lateral palpation may even detect the edges of the induration, and determine its thickness, as well as its superficial character. The absence of resistance on firm pressure, and of dulness on percussion, distinguishes these superficial indurations from more solid tumours.

A thickened state of the coats of the intestines is of much commoner occurrence than is generally supposed; and in most instances of chronic diarrhœa it can be detected by careful palpation in the region of the cæcum, or of the ascending or the sigmoid colon. For this examination the patient should be in bed, lying flat on the back, with the muscles quite relaxed; the abdomen is then to be felt by gentle steady pressure with the flat fingers, gradually slided to successive parts; the greater superficial resistance, in one or more of the regions just mentioned, will then become very obvious; and it is sometimes, but not always, accompanied by tenderness on deeper pressure in the same spot. Although feeling thus hard to superficial pressure, it yields with some resistance to firmer pressure, and gives a tympanitic sound on percussion. This thickening of the large intestine apparently results from a low inflammation of a chronic or subacute kind, and is usually attended by occasional attacks of diarrhœa, or even slight dysentery, sometimes alternated with constipation. A married lady, æt. 30, had for more than twelve months been liable to attacks of severe diarrhœa, which greatly reduced the flesh and strength; the catamenia became irregular and defective; and the whole constitutional powers were failing. Travelling on the continent had been

tried with temporary benefit; but the attacks continued to recur; and the bowels being confined in the intervals, and the appetite bad, no progress was made towards recovery. In this case I found distinct fulness, with superficial resistance, from the right iliac to the hypochondriac region; and an irregular but moveable resistance was also felt in the left iliac fossa. All this tract was tender on pressure, even when diarrhœa was absent. Counter-irritation over the course of the colon, first by a blister, and subsequently by solution of iodine, using, at the same time, an India-rubber belt, lined with soft wool, succeeded in removing the thickening of the bowel. After a month's treatment, there was no return of diarrhœa, and the health has been uniformly good ever since, a period of five years. In another case, that of a married lady, æt. about 36, severe abdominal irritation, with dysenteric diarrhœa, was brought on by too frequently bathing in the sea. The symptoms were repeatedly relieved by astringents, farinaceous diet, and confinement to bed; but they always recurred so soon as she attempted to get up and return to the usual diet. Being summoned to Ramsgate to see her, I found, on examination of the abdomen, a very palpable hardness and fulness along the whole tract of the colon, from the cæcum to the sigmoid flexure inclusive; and it was only after repeated blistering, and counter-irritation with iodine over these parts, whilst the bowels were regulated by small doses of sulphate of copper and narcotic extracts, with occasional mild alterative aperients, that a permanent cure was effected. In many cases of chronic diarrhœa and dysentery I have detected the same physical signs of thickening of the large intestine, and have by them been guided to the same successful mode of treatment.

In these cases the thickening of the intestine is probably the result of a low inflammation, sometimes excited by the injudicious administration of astringents to stop a diarrhœa. The thickened bowel has an irritable mucous membrane, whilst the regular and efficient contraction of its muscular coat is impeded by the deposit, which consists partly of thickened epithelium, and partly of exudatory matter under the mucous membrane. Hence, too, the combination, or alternation of irritative diarrhœa with costiveness and retention of scybala. Practitioners are apt to regard the scybala as the true cause of the irritation and diarrhœa; and doubtless they may contribute to keep it up: but their repeated formation and retention are really due to the altered structure and impeded function of the intestine, and are to be prevented only when its motory and secreting powers are properly restored.

In feeling for these intestinal thickenings, some variation of manipulation is necessary in different parts of the abdomen. The cæcum is usually quite superficial, often forming a fulness or prominence in the right iliac region, and extending more or less towards the linea alba and upwards. Its thickening is detected by gentle pressure meeting with more resistance and hardness than is felt in the hypogastric or left iliac regions, whilst the sound on percussion is still hollow, although often less so than usual. The ascending and transverse parts of the colon usually lie deeper; and, if within reach, require more pressure to test their resistance; which, if increased, is to be distinguished from that of an enlarged liver by being more rounded, and with a hollow stroke-sound. The sigmoid flexure of the colon

lies still deeper in the left iliac fossa; and, if thickened, is to be felt from the left side, by the flat fingers gradually pressed with a rotating motion and increasing firmness; it is usually contracted, contains little or no air, and feels like a large curved cord, in some degree moveable, in the hollow of the ilium.

The thickening of the intestine, hitherto described, is supposed to be of inflammatory origin; but it may save repetition to mention here, that *malignant disease* may grow in the same situations, present somewhat of the same signs, and be detected by similar manipulation. The diagnosis of malignant formations may generally be established, both by reference to the constitutional symptoms, and by peculiarities in the local disease. On the former we need not dwell at present. The peculiarities of malignant growths, as distinguished from inflammatory deposits, consist in their assuming more the form of circumscribed tumours; both from their being developed in more nodular masses, and from their disposition to penetrate and amass together contiguous tissues and organs, and further to involve them in their ulterior processes of irritation, contraction, ulceration, etc. Even diffused malignant growths on the intestines may therefore generally be distinguished from simple inflammatory thickening by their greater irregularity of surface, being more nodulated and circumscribed, and often connected with a deeper-seated tumour, which affords much more than the superficial resistance of thickened intestines.[1]

Malignant disease of the stomach, when affecting the pyloric end, and often involving a portion of the duodenum, colon, and pancreas, in most cases forms a palpable tumour, to be felt on pressing more or less deeply to the right of the epigastrium. Much tact and tenderness are often required to enable the hand to reach deep enough to feel the tumour; and a favourable opportunity should be taken when the bowels are empty, and when there is the least amount of sickness or tendency to pain. The pressure should be rotatory and gradual, in the direction of the spine. The tumour, when felt, is rarely quite dull on percussion, and often pulsates, from the motion of the subjacent aorta; but the pulse is in one direction only, and not diastolic, or enlarging at each beat, as in the case of aneurism. The tumour is easily distinguished from the liver by its being deeper seated; or if it be larger and approach the surface, by the tympanitic interval between it and the mass of the liver, the signs of which belong to the

[1] The following case is uncommon, but I mention it as both exceptional, and yet illustrative of the importance of physical examination. An unmarried lady, aged 26, who had always been delicate, came under my care for gastritic dyspepsia, which resisted all the usual measures. Intolerance of all nutritious food, and consequent wasting, ensued, and subsequently obstinate constipation and great distention of the intestines. An eminent physician who was called into consultation, considered the case hysterical, and advised the persevering use of galbanum and colocynth purges, aided by the rue enema. I did not concur in that opinion; because by careful palpation I had distinctly felt a thickening of a portion of the intestines. I supposed this thickening to be the result of chronic inflammation, and apprehended ulceration and perforation should the obstruction continue. Perforation and speedy death did ensue; and examination discovered very extensive thickening of both stomach and ileum; but the thickening was from malignant disease, which in so young a person I did not anticipate. The ileocæcal valve was almost closed by stricture, and the intestine above was ulcerated and perforated.

lower right ribs, and upper part of the epigastrium. Scirrhus of the cardiac end of the stomach is less within the reach of palpation, as this portion lies both deeper and more under the ribs. I cannot now call to my recollection a case in which I have been able to feel the tumour where it was confined to this end of the stomach. On the other hand, I can scarcely remember one case of malignant disease in other parts of the stomach and intestines, where, sooner or later, a tumour or induration has not been felt, so as to serve to confirm a diagnosis, which is often too evident from the general symptoms.

When malignant disease causes obstruction of the intestines, those portions above the impediment may become enormously distended, and their outline may often be traced by palpation, as in cases of fæculent accumulation; but this tends to put out of reach the obstructing lesion, which is buried in the accumulated mass. If the stricture be in the rectum or sigmoid flexure, its presence may sometimes be inferred by the obstacle opposed to a finger, to a bougie, or to the contents of an enema introduced by the rectum.

Solid massive tumours in the abdomen, as those of a much enlarged liver or spleen, present certain palpable characters in common, which should be noticed before we advert to the individual varieties. In proportion to the mass which is in contact with the walls of the abdomen, an enlarged liver or spleen will present the resistance and weight of a solid body, soft or hard, as the case may be. When soft, it may not feel much more resisting and inelastic than the abdomen in general, especially if felt only in points with the ends of the fingers; but if pressed more in mass with the flat of the fingers, and more particularly if the weight of the tumour be brought to bear against them by a leaning forward or prone posture, the feel of the solid enlargement, although soft, becomes quite palpable, and may be contrasted with that of other parts of the abdomen containing intestines only. Again, a slight abrupt impulse given to one point of a soft solid may cause a kind of undulatory movement through it, which might be mistaken for fluctuation; but besides its wanting the soft and gravitating character of liquid motion, a distinction may be made by giving the body a flat push on one side, which will be communicated to the hand on the opposite side with the impulse peculiar to a solid body. In fact, by a little management, we may generally contrive so to handle and feel the tumour, as to infer from its consistence, resistance, weight, and shape, the nature of its material.

The test is easier when the tumour is harder and more dense, because then its greater resistance and weight are more obvious, and so strikingly contrast with those of the abdomen in general, that it is easy to feel the outline of the mass, and trace its precise shape and position. Its continuity, likewise, from front to back, or from side to side, can be determined by finding that a push or impulse is transferred by it, which it would not be, if fluid or air intervened.

In many such cases the weight of this tumour causes some variation in its position with change of posture; and we may avail ourselves of this to ascertain its form and dimensions, and its relation to the other contents of the abdomen. This is especially needful in the common combination of solid tumours with liquid effusion; the liquid, if

abundant, putting the tumour out of reach, until, by its greater weight, it is brought to bear down against the walls.

The *liver* may enlarge in any or in every direction, upwards, downwards, and outwards, in front, at the side, and behind. Except when upwards only, a very rare case, the enlargement may be detected by palpation, as well as by percussion and inspection. The outward bulge is more obvious to sight than to touch; but if at all considerable, it may readily be felt on passing the hand from above downwards, from the middle regions of the chest to the upper parts of the abdomen, making a comparison of the right with the left sides. The bulge of liver enlarged laterally then meets the hand in a way that can hardly escape notice, and if found to be dull on percussion, and resisting pressure, it may fairly be diagnosticated as such in cases where no opportunity is given for inspection. The most common mode of enlargement, however, is downwards, with more or less general fulness; and as this brings the organ below the margin of the ribs under the pliant walls of the abdomen, it becomes the especial object of examination by palpation. The amount and kind of enlargement will determine the degree of facility in detecting it. If the liver do not extend beyond an inch or so below the ribs, it may not be felt at all; for it must be remembered that its margin being thin, it may oppose to the fingers no palpable resistance, especially if the walls of the abdomen are at all thick. But if the organ reaches two or three inches below, even without any material thickening or increased density, the fingers can scarcely fail to feel its resistance, particularly when aided by comparing the pliancy of the abdomen in the left hypochondrium. When the liver is still more enlarged, its margin usually becomes thickened as well; and besides the very distinct resistance which its anterior surface offers to the fingers, the lower margin may now be felt as a distinct ridge by the fingers pressed into the abdomen below it, and then moved rather briskly upwards. For the examination of the liver, the sitting, standing, or leaning forward posture, answers best; the observer placing himself either in front, at the side, or behind, according as he can best apply his hands to the abdomen.

It is in the case of induration with enlargement, that disease of the liver is most obvious to palpation. There is then no need of comparison with other parts of the abdomen; the hard substance of the organ forming a tangible object, the surface, outline, and irregularities of which may be independently explored in all their details. In such cases we can often determine with great nicety whether the substance is granular or uniform; whether the edge retains its wedge-shape, or has become thick and rounded by deposit and the contractile process. We may often feel the under surface of the organ, and trace its inequalities, with the position and state of the gall-bladder.[1] Nor are these

[1] The following case is not less interesting in its diagnostic than in its pathological and therapeutic relations.

A dignitary of the Church, of sedentary habits, had for years been subject to attacks of severe pain in the hypochondria, attended with obstructed flow of bile, and generally followed by more or less jaundice. For some time these attacks were considered and treated as arising from gall-stones; but they had latterly become so frequent and severe, and the strength and flesh had been so much reduced, that great fears were entertained that there was malignant disease pre-

nice points of diagnosis matters of pathological or speculative interest only. They have a direct bearing on the prognosis of the case, and are by no means useless in guiding the treatment. The soft enlargements of the liver are in many instances tractable under remedial measures, especially those which increase and liquefy the secretion of the organ; and the transition to the state of induration is not so abrupt or universal as to preclude similar means from being highly useful, even where considerable hardening of the tissue has taken place; the salutary effect being generally attended by a palpable diminution of the hardness, as well as by a reduction of the dropsy, jaundice, and other consequences of the obstruction. In these more tractable cases of indurated liver, we do not feel the rugged surface and granular irregularities which are present in the more formidable kinds of cirrhosis; nor do we find the proofs of failure of function and degeneration of structures in the general symptoms—such as progressively failing appetite and strength; increasing jaundice and dropsy, although bile is excreted, and urine is not greatly deficient; gasping breathlessness, or orthopnœa; fluttering or rapid pulse; with the ominous arcus senilis, etc.—indications of the worst kind, which leave no hope of real recovery.

The alteration in the shape of the edge of the liver, from wedge-shaped to rounded, often occasions a displacement of the organ from its natural position, which it is important to notice in reference to its physical signs. So long as the liver retains its proper shape, its anterior surface remains in close contact with the abdominal walls, unless a liquid effusion happens to separate them, which is clearly evinced by the sign of *diahydric*[1] succussion before described. But when the lower margin becomes rounded, portions of intestines are apt to slip up between the walls and the liver, and to separate its lower

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sent. On my first seeing him, he was much emaciated; the liver did not reach below the margin of the ribs, and there was no feeling of any tumour or hardness underneath. One spot, just below the right ribs, two inches from the ensiform cartilage, was pointed out as being always tender, and the seat of the most intense pain during the attacks; then, I was assured, it became the seat of a hard swelling. On one occasion only I felt this swelling; it was then soft and of a rounded shape, but the attack was on the decline. This seemed to me so much like a distended gall-bladder, and the whole case so like one of biliary concretion, that I caused a diligent search to be made in the evacuations. In a few days a gall-stone was found, consisting as usual of cholesterin. The diagnosis being thus clearly made out, and the usual means of treatment having failed, it occurred to me that the cod-liver oil, which I was then giving extensively to phthisical and cachectic patients, might prove a means of dissolving the concrete biliary matter, and of promoting a better secretion in the liver. It was given, and answered perfectly; only one slight attack happening after its use; appetite, flesh, and strength, were gradually restored, and the gentleman has been constantly engaged in his ecclesiastical duties for nearly three years. But what is worthy of remark is, that under this treatment the liver enlarged in size, so as to reach nearly two inches below the margin of the ribs, and the tender spot descended with it, and in the single slight attack which did occur, it formed a palpable fulness just two inches below its former position. In a few weeks the tenderness was removed. This gentleman consulted me for a slight ailment this day (Feb. 3). I found the liver still reaching between one and two inches below the margin of the ribs, but quite free from all tenderness or swelling.

[1] I propose this term (from *dia*, through, and *hudōr*, water,) to express the characteristic sign of *striking through liquid*, noticed in this paper on the Palpable Signs of Liquid.

part more or less from them. The liver thus becomes partially enveloped in intestines, and can no longer be felt distinctly. The gurgling of the intervening bowel may often be felt on pressure; and the prone position may cause the weight of the liver to compress it for a time, but it is not easy to displace the intestine when the shape of the liver is thus altered; and it is necessary to be aware of the fact, or we may consider the liver to be much smaller than it really is.

It is not necessary to dwell on the varieties of extent and form of enlargement of the liver determinable by palpation; but there is one which is so peculiarly diagnosticated by it as to deserve mention. I allude to dimpled cancerous tubera in the liver. The shape of these tumours, rounded, flattened, and umbilicated, or with central depression, is so characteristic, and they so frequently rise from the anterior surface of the enlarged organ, that in as many as five or six cases I have been able to feel them through the walls during life, and announce their existence, and the consequently unfavourable prognosis. Two of these cases, modelled in wax, are preserved in the museum at University College.

The *spleen*, when only moderately enlarged, lies deeper than the liver, and with the stomach in front of it; therefore, in feeling for it, below the margin of the left ribs, we must use deeper palpation, aiming the fingers obliquely upwards and to the left, instead of the superficial direct perpendicular pressure practised in testing the right hypochondrium for the liver. Its peculiarity of shape also is equally apparent; for so soon as it is sufficiently enlarged to come within the reach of the fingers, it offers to them the resistance of a rounded and somewhat moveable body, meeting the fingers and slipping aside under their pressure. With a further amount of enlargement, the spleen reaches lower under the ribs and nearer to the surface; and it then becomes more easily palpable, both from its more accessible position, and from its bulk and weight opposing a more decided resistance to the fingers. In its greatest degrees of hypertrophy, the spleen extends more or less down the whole left side of the abdomen, approaching the umbilicus in front, and reaching nearly or quite to the left ilium. When thus greatly enlarged, it is in contact with the walls of the abdomen under the whole margin of the left ribs from the spine to the epigastrium, or near it; it occupies the whole lumbar, hypochondriac, and iliac regions of the left side, and may in parts extend even across the mesial line. To all these regions it gives the peculiar resistance of a heavy solid body; compact, and transmitting a flat, heavy impulse, or push, through its mass; but not often hard; usually smooth and even on all surfaces but that which forms its right boundary, on which rounded prominences and intervening indentations can be felt. These correspond with the internal margin or pelvis of the spleen, into which it receives its vessels. To the right lie the intestines, which, by their elastic feel and hollow sound, contrast well with the dead heavy mass occupying the left of the abdomen, and sometimes causing considerable enlargement of its whole bulk.

These physical characters are in most instances quite sufficient to identify an enlarged spleen; but they are further to be confirmed by the results of percussion, and by the general symptoms of pallid cachexia, which commonly accompany great enlargements of the

spleen. I must not omit to mention that the spleen, not being firmly sustained in its position like the liver or kidneys, may somewhat change its position according to the posture; and this, although it may prove an additional means of diagnosis, has sometimes been a source of error. In common with all the medical men who examined the case, I once mistook a much enlarged spleen for an ovarian tumour. It occupied the lower half of the abdomen; its upper margin reaching from the right iliac obliquely to the left lumbar region; and the rounded prominences of the upper surface were supposed to be cysts of an ovarian tumour. They proved to be the protuberances of the vascular or inner surface of the spleen, which had fallen completely out of its place, so that this surface now lay uppermost, whilst that which usually occupies the side rested on the pelvis.

The kidneys, from their deep position in the abdomen, might seem to be beyond the reach of palpation; but, except in cases of considerable thickness of the walls of the abdomen, or of their distension by the bulky contents of the intestines, or by effusion in the peritoneum, a little contrivance and tact will generally enable the hand to feel these glands sufficiently to detect any material enlargement, as well as to test their degree of sensibility. For this purpose it is necessary to displace the superjacent intestines; and this is to be accomplished by rotatory pressure, gradually, but steadily increased, until the hand sinks so deep in the abdomen as to feel its posterior walls. The kidneys occupy the most prominent part of these, on either side of the spine, beneath the lowest bend of the ribs in front, a little above the line of the umbilicus, and from two to four inches to the right or left of it. For making this examination, the patient should lie flat on the back, with the limbs straight, but the muscles all as much relaxed as possible. The observer should be on the side opposite to that of the kidney that he is going to examine; and he should change sides to feel for the other. The right hand is then to be applied below the ribs, the fingers pressed flatly with a rotatory movement towards the kidneys; the steadiness of the pressure being maintained, if necessary, by the left hand applied on the right. The right fingers then, in their rotatory pressure, glance over the interior lumbar region; and the lower half of each kidney may usually be felt as only a slight flattened convexity in their natural state; but, when enlarged, forming a palpable prominence of rounded form, and often painful on pressure, the pain being sometimes referred to the loin, and the course of the ureter, as well as to the site of the kidney itself. In effecting this examination, it is often necessary to take off the patient's attention by conversation, to prevent those muscular efforts in the chest and abdomen, which are excited by nervousness or dread of pain, and which greatly interfere with the success of the exploration. Hence very timid or sensitive persons can rarely be examined satisfactorily in this way. The left kidney is more easily reached than the right, on account of the greater resistance opposed to deep palpation on the right side by the liver. The right, however, lies a little lower in the abdomen; and this brings it, in part, from under the last ribs in the right lumbar region, which is a spot in which both the fulness and tenderness of an enlarged right kidney may often be detected.

The diagnosis of moderate enlargement, with tenderness of the

kidney, through deep palpation, is of great importance in relation to practical measures. Often, guided by it, have I succeeded in curing acute albuminuria, and in relieving that of a chronic character, by means of cupping, blisters to the loins, and hydragogue purgatives; and in many instances the reduction of the swelling of the kidney, with the entire disappearance of albumen and of granular cell-casts of the tubuli from the urine, and the restoration of the proper amount of excrementitious matter, has proved that the disease was merely congestive, or subinflammatory, and the cure has been permanent. In other instances the tenderness has subsided, but not the enlargement; and the urine, although improved, has given proofs of a remaining structural disease, in its never recovering a healthy standard in quantity, specific gravity, and freedom from albumen.

Very bulky enlargements of the kidneys are more readily detected by palpation, both in front and in the lumbar region; and their position, shape, and immobility, pretty well serve to distinguish them from other tumours. Cysts in the kidney, and the expansion of the gland by the purulent fluid of chronic pyelitis (formerly mistaken for abscess), may be felt as a rounded, soft, heavy, fluctuating tumour, in the lumbar and iliac regions. Malignant disease of the kidney is usually attended with considerable enlargement, which, from its irregular form, and from the amount of blood commonly present in the urine, in conjunction with the general history and other symptoms, will generally serve for the diagnosis.

In several instances, I have detected, by deep palpation, *enlargement and thickening of a ureter*, commonly in connexion with chronic pyelitis. It is felt as a hard cord-like body, deep in the iliac region, more or less moveable, and transmitting the pulsation of the iliac artery at the point at which it crosses it. The enlarged ureter is tender on pressure, and the pain shoots upwards to the loin, and downwards to the testicle of the same side.

Enlargement and induration of the mesenteric glands may be supposed to be a fit object for diagnosis by palpation, and by careful manipulation it may generally be detected; but not so readily as might be anticipated; for with it there often coexists so much tympanitic distension of the abdomen, as to prevent the hand from reaching the deeper parts. But by choosing times when the bowels have been well cleared, and by using firm flat palpation, with some rotatory movement, followed by an increased pressure towards the back, the nodular glandular tumours may often be discovered.

Further illustrations of the utility of palpation might be given in cases of solid ovarian and uterine tumours, of pregnancy, of psoas abscess, of malignant disease of the bladder, of pelvic abscess, etc., etc.; but this part of the subject has already exceeded my intended limits; and quite enough has been given to illustrate the principles of manual examination of the abdomen. In my next communication, the acoustic signs of the abdomen will be considered.

(To be continued.)

CASES OF LABOUR, COMPLICATED WITH ULCERATING CANCER OF THE WOMB: WITH REMARKS.

By HENRY OLDHAM, M.D., Obstetric Physician to, and Lecturer on Midwifery, etc., at Guy's Hospital.

Case I. Ulcerating Carcinoma of Cervix Uteri during Pregnancy—Breech Presentation—Rupture of Uterus. On the 17th of June 1847, Mrs. H., a poor woman, with a pale and anxious face, called at my house for advice. She was 33 years of age; had been married eight years, and was the mother of four children, whom she had carried well, and given birth to without difficulty or accident. She had suckled the last child for fourteen months; and, before weaning it, had again become pregnant, and was now seven months advanced in gestation.

The principal symptom of which she complained, was a frequent coloured discharge, which first came on a month after she was pregnant, and had continued, with but short intermissions, to the present time. It was now brought on by any exertion, or by straining to relieve the bowels. Four days since she had had an attack of bleeding, which came on like a menstrual period, the discharge being of a vivid red colour. It lasted in this way for two days, and was succeeded by a profuse watery discharge of a faint, but not very offensive smell. She was restless at night, feeble and low-spirited in doing the work of her family in the day, and she occasionally had a burning pain at the lower part of the abdomen and back; but the degree of pain which she suffered was far less than is usual with the same disease in the unimpregnated state. The child moved freely.

On making an examination, I found the cervix the seat of malignant disease, which had already destroyed a considerable portion of both lips of the os uteri, leaving a circular hole large enough to admit the tips of two fingers, with which the presenting part of the child could be felt through the membranes. The tissue of the cervix, around the os uteri, was thick, hard, and uneven; and a hardened, well-defined bar of solid matter could be felt on the anterior segment of the womb. The appreciable limit of the disease in this direction seemed to correspond to the os uteri internum. The finger could not reach sufficiently far posteriorly to ascertain the extent of tissue which had there become implicated; but, as far as could be felt, it was unusually hard and rigid. The examination caused some bleeding.

Mr. Wells, a gentleman in practice in the neighbourhood, from motives of humanity, and from interest in the case, undertook to attend her in her confinement. In consultation with him, it was agreed that she should be allowed to go on her full time, and that the manner of delivery should be determined by existing circumstances. She was to live as well as she was able, and to take some tonic medicine, and an opiate occasionally at night.

On the 31st July, I was requested to see Mrs. H——, who was reported to have been in labour for some hours: but, on visiting her, I found her to be suffering from an aggravated degree of false pains, mixed with much pain that was connected with her disease. On ex-

amination, I found that the disease had made progress in the cervix, which was lower in the pelvis, and more open. The extent of surface which was affected seemed considerable, including the whole interior of the canal of the cervix, which felt of a stony hardness, and broken up into a rough, deeply rutted, bleeding tissue. Having stretched my finger through this seemingly lengthened passage, I could feel the presenting part of the fœtus, which appeared to me to be the breech. An opiate was given, which produced some hours' rest, and much refreshed the patient.

On the night of the 3rd of August, Mr. Wells sent me word that Mrs. H. was in labour, and that the breech presented. On seeing her, I found that, under the influence of regular pains, the cervix had yielded somewhat, the os uteri being more open, and more dilatable; and the breech of the child was easily felt. The front wall of the cervix, however, was indurated, thick, and unyielding, like a mass of hardened mortar. The bladder was distended with urine, which was drawn off, to the amount of a pint and a half, with the catheter. She had vomited occasionally since labour had set in: her pulse was rapid and feeble; and her countenance had the sharp, pallid, anxious look so characteristic of an advanced cancer. The dilatation of the os uteri was not sufficiently advanced to allow of any interference, and I agreed to meet Mr. Wells again in a few hours; during which time he watched for any opportunity which might offer to help delivery.

At 7 A.M., on August 4th, I received a note from Mr. Wells, telling me that the poor woman had suddenly become collapsed, and was dying. Before I could reach her house, she had been dead about twenty minutes. Since I saw her, labour had gone on, with some effect on the dilatation of the os; but she had been vomiting, and had then become deathly faint, and moribund.

POST-MORTEM EXAMINATION. This was made on the same night, the weather being extremely hot. We found that already some marks of decomposition were visible on the body. On opening the abdomen, some bloody fluid, composed of liquor amnii and blood, ran out. The uterus was distended with gas; and on drawing it forward, the fœtus (a full-grown male) was found projecting half through a longitudinal rent, about five inches in length, in its back wall, beginning at the cervix and extending upwards on the body. The fœtus, uterus, and adjacent abdominal viscera, were all in a state of incipient putrefaction. The uterus and its appendages were removed, and taken to Guy's Hospital. The placenta, from the rapid progress of decomposition, separated from the uterus. The abdominal viscera were very cursorily examined, as the room was dimly lighted, and we were mainly intent on getting away the uterus; but, as far as we ascertained, they were free from disease.

The size of the uterus, and thickness of its walls, were natural. The whole inner surface of the cervix was thinned by malignant disease; and the structure was deeply furrowed and hard. The upper boundary of the disease, marking the inner opening of the cervix, was very clearly defined by an edge of healthy tissue belonging to the internal part of the body of the uterus, which was altogether free from malignant disease. The vagina also was healthy. On the posterior surface of the uterus, on the left side, was a small superficial

patch of malignant deposit; and, spreading from it to the ovary and tube of the same side, were numerous bands of false membranes. The right ovary, too, had been enveloped in a web of false membranes. There was a corpus luteum in the left ovary.

Case II. Carcinoma of Cervix Uteri—Pregnancy—Delivery by Craniotomy. In 1848, a poor woman, nearly 40 years of age, became an out-patient, under my care, at Guy's Hospital, for hard cancer of the cervix uteri, with occasional hæmorrhage, and a constant fœtid watery discharge. She had had syphilis some years before, and had lived a hard and destitute life. Her general health improved under the influence of tonic medicines, with some astringent and sedative wash to the uterus. I then lost sight of her.

About a year from this time, on May 7, 1849, Mr. Leadam, of Tooley Street, sent me word that this patient was in labour; and finding a great obstacle to delivery, and thinking that I should be interested in the case, he asked me to see her. I found that she had been in strong labour for some hours, and was getting weak and exhausted, but that the os uteri was prevented from dilatation by a mass of ulcerating cancer in the cervix, from whence a fœtid discharge was oozing away, which had inflamed and excoriated the external organs. At the time, I thought that the malignant disease had not gone on so rapidly during her pregnancy as I should have expected; but the extent of the cervix-tissue which had become infiltrated was considerable, and offered a formidable obstacle to delivery. The head was presenting, and could be felt through the disc of the os uteri, which, during labour, had become dilated to the size of a crown-piece.

To deliver her as soon as possible was imperative. I perforated the head, and freely emptied its contents; and, under the influence of uterine action, the bones collapsed well. I fixed the crotchet firmly on the inside of the presenting parietal bone, rather posteriorly; and being able to make powerful traction in this direction (which was the best for the head to pass in small compass) I had the satisfaction of finding it clear the hard narrow passage of the cervix with but little laceration of its structure. The remainder of the child was removed without difficulty. The placenta was strongly adherent, and was obliged to be peeled off with the hand.

I have since been informed by Mr. Leadam, that the woman lived about a month. On inspection after death, the cervix was found to be the seat of malignant ulceration; and on the posterior wall of the vagina, close to the cervix, were some ulcerated patches which had perforated the walls of the vagina, and communicated with the pelvic peritoneum. Peritonitis, of a low form, had supervened, and there was some purulent effusion in the peritoneum. There was a small cyst, of the size of a chestnut, in the right ovary.

Case III. Cancer of the Uterus and Vagina—Death of Fœtus in Utero—Easy Birth—Perforation of Vagina. I saw Mrs. P——, a poor woman, 42 years of age, on the 26th July 1850. She had been married twenty-three years, and had had twelve children. She had been confined six weeks. When one month gone in her last pregnancy, she began to have watery discharges with bleeding, and suffered severe pain in the loins, hips, and legs, so that

sometimes she could neither sit down nor move about. Sexual coitus brought on bleeding, and was forbidden. She suffered much from constipation. When these symptoms first appeared, she sought advice from an experienced medical man, who told her that she had cancer of the womb; but, at different times during her pregnancy, assured her she was not pregnant, although her own confidence in the fact of her pregnancy remained unshaken. She was suddenly seized with labour pains on June 9th, 1850, after she had gone her full time, according to her reckoning, and was easily delivered of a dead male child. The placenta was expelled without difficulty; but both the child and the secundines were putrid. Since this time, she had been getting worse; the discharges of blood and fœtid watery discharge had been mixed with fæculent matter. She was cachectic, and greatly exhausted, and a constant sufferer from cancer pains.

On examination, the cervix uteri, and the posterior wall of the vagina, were found extensively destroyed by ulcerating carcinoma; and there was an opening into the rectum, through which the fæces passed. The disease was in an advanced stage; and her feeble constitutional power seemed unlikely to hold out long against the exhaustion produced by it.

Remarks. The preceding cases are instances of an extremely rare complication of pregnancy and labour, and one which, when viewed in relation to delivery, is of practical importance. They were all three cases of carcinoma of the cervix in a state of ulceration, and not of the fungoid or softer form of malignant disease. Neither are they to be associated with what has been termed the scirrhous os uteri in an early stage, by which is meant, either entirely or partially, a hard, somewhat large, and nodulated cervix, but without ulceration. This morbid condition, so common in the unimpregnated state as the result of chronic inflammation, may also exist in pregnancy, although it usually becomes softened as gestation advances, by the accumulation of the mucous secretion of the glands of the cervix, and the large supply of blood, and offers but little impediment to labour. Cases of this kind have been classed as cases of cancer with pregnancy, but without any conclusive proof of their being really cancerous. Here and there, as very rare exceptions, such cases may retain their induration and indisposition to dilate during labour. There is a preparation in the Museum at Guy's Hospital, where a large flap of the lower segment of the uterus was separated after a long first stage of labour; but there is nothing in the swollen and indurated cervix to indicate malignant deposit. I doubt very much whether any one, who has so thoroughly investigated the subject as to know when he has failed as well as when he has been right, would have any confidence, from a physical examination of the cervix, in pronouncing a disease to be carcinoma before it had begun to break down. Directly this process begins, it may be detected by a kind of brittleness of the edge of the os, or inner surface of the cervix, on a hard base, which is very characteristic of the commencing work of destruction. But there is nothing in the touch of the antecedent "scirrhus" to distinguish a benign and curable from a cancerous and incurable induration.

In Case III, the posterior wall of the vagina was implicated in the

disease; but in the other two it was confined to the cervix, converting this part of the uterus, towards the end of pregnancy, into a rugged indurated channel, involving a large amount of structure, and offering a solid unyielding obstacle to the progress of uterine dilatation.

The possibility of impregnation occurring in cases of incipient, or even open cancer of the cervix, notwithstanding the bleeding and watery discharge, is authenticated by several recorded cases,[1] and confirmed by the present instances. And however improbable such a concurrence may be, yet it is an important point in practice to give due weight to any signs or suspicion of pregnancy, to note them, and to carefully investigate them, with the view of deciding this question. In the third case, in spite of the woman's own assurance of being pregnant, this precaution was omitted. In the number of cases of cancer of the neck of the womb which come before me, especially in hospital practice, I have been struck with the comparative frequency of sexual intercouse between husband and wife, when it would be thought that the fœtid discharge and bleeding would have secured its voluntary suspension. The effect of the discharges on the glans penis in these cases, with but rare exceptions, is not irritating; and the possibility of pregnancy, during the child-bearing age, independently of the injury to the woman when the cancer is ulcerating, ought to warn the practitioner to take care that sexual connexion be forbidden.

When pregnancy is known to be present, and the fact of a pre-existing cancer has not been ascertained, it is possible that the signs of the development of the disease may be confounded with some of the morbid states of pregnancy; and palliative measures may be alone prescribed. In the first case, no vaginal examination had been made before the woman applied to me at the seventh month, although she had been previously under medical care, and no suspicion of so serious a disease had been entertained. It is always desirable to examine the uterus *per vaginam*, and to ascertain the condition of the cervix, if bleeding comes on frequently during pregnancy, although it may not amount to a profuse flow at any time; especially if it be brought on after walking, or straining, or during the sexual act, and if it be followed by a watery, or thin purulent discharge, with a more or less fœtid odour. Symptoms like these would warrant a strong suspicion of malignant disease; but, until the parts are examined, no certainty can be arrived at. It has happened to me to entertain this suspicion, when the case has turned out to be one of a few warts within the labia, whose fœtid secretion has, from neglect of cleanliness, collected about the parts; and the occasional small bleedings have come from a neglected ulceration of the cervix, whose vascularity has increased with pregnancy. A more common case is met with, especially in hospital practice, which, in its symptoms in connexion with early pregnancy, more closely resembles cancer. I mean induration of the cervix, with a granular suppurating surface within its channel, the result of chronic syphilis. This may, or may not be associated with thickening of the cellular tissue of the labia and œdematous effusion, with fissures and excoriations about the external organs. When pregnancy occurs under these circumstances, there is occasional bleed-

[1] See Dr. Robert Lee's Clinical Midwifery. Second Edition, p. 90.

ing from the surface of the cervix, a thin, ichorous, acrimonious, and offensive discharge, and the aspect of the patient is akin to the malignant cachexy. I have felt the cervix in a case of this kind, and have doubted at first whether the disease were malignant. This is one of the cases in which the induration may sometimes last to the end of pregnancy, and oppose the dilatation of the os. The diagnosis of syphilis is to be formed from the previous history, and other existing indications of it in the integument, periosteum, etc. The progress of the disorders, during pregnancy, is different. The morbid conditions of the cervix, in the venereal state, do not become materially aggravated; but, on the contrary, the induration may become partially, or, I believe, even altogether effaced under the physiological softening of the cervix. Such a case is more like cancer at the beginning than at the end of gestation. True carcinoma of the cervix, although in some cases it appears to have been rather tardily developed, generally, as in the first case here recorded, rapidly progresses, destroying the inner surface of the cervix, and infiltrating and hardening the deeper and adjacent parts. When examined by the finger in an advanced state, there cannot well be any mistake about it. The circle of the os is more open than in normal pregnancy, from the positive loss of substance; while its edge, and the whole inner surface of the cervix, is rutted and indurated, with a surface which bleeds and breaks down under the touch of the finger; which, on being removed from the vagina, brings with it some of the fœtid discharge. If the finger be not introduced *within* the cervix, and the outer or vaginal surface of the cervix be not yet destroyed, this part of the lower segment of the uterus feels like a solid uneven tumour, which is interposed between the finger and the presenting part of the child. If there have been much bleeding, or a sudden hæmorrhage towards the end of pregnancy, and a clot have formed within the cervix, the malignant disease not having previously been known, the physical conditions may, when first felt, resemble placenta prævia; especially if the disease be of a fungoid character. If the finger, however, be passed *within* the cervix, so as to displace or go beyond the clot, the solid uneven surface of the cancerous mass will be perceptible.

The prognosis in cases of carcinomatous degeneration with pregnancy is most unfavourable to both mother and child. The mother may die from the exhausting effects of cancer,—viz., hæmorrhage, copious watery discharge, vomiting, etc., before labour sets in. She may die undelivered, from ruptured uterus, or of exhaustion from protracted labour. Or, if she survive the immediate perils of delivery, she may sink exhausted a few hours or a day or two afterwards. If this does not happen, the disease generally goes on more rapidly, perhaps rendered less tolerable from some injury to the soft parts by the delivery, and ends in a few weeks, or possibly a few months, in death.

The death of the child is very common. It frequently happens (in about a third of the cases) that premature labour, between the sixth and seventh month, spontaneously ensues, the child sometimes having lain dead and putrid in the uterus, and then easily escaping during labour, as in Case III; this is certainly the most favourable termination for the mother. In other cases it is necessary to destroy it to effect delivery; or it may die in the course of delivery, as in Case I.

I know of no facts to shew whether the few who are born alive, and live, inherit the taint of cancer; but assuredly such a child would need the breast-milk of a healthy wet-nurse, and the same hygienic care and solicitude in its rearing which are given to scrofulous children.

Treatment. Some cases are recorded in which parturition at term has been accomplished by the natural powers, the mother surviving the act,[1] and the child being born alive. But so favourable a termination of labour, however it may be hoped for, is hardly to be expected. Death of the fœtus at the sixth or seventh month, its retention and putrefaction in the uterus, and its comparatively easy birth, have already been alluded to, and may be reckoned upon as probable events.

Our principal resources in the management of such cases are the artificial induction of premature labour, lessening the child's head, dividing the diseased structures, and the Cæsarean section.

Dr. Robert Lee's opinion, with reference to the first of these operations, is very decided. "If abortion", says he,[2] "does not take place where pregnancy exists with cancer of the os uteri in an advanced stage, the membranes of the ovum should be perforated if possible, and at the seventh and half month if the disease is less extensive." When I saw the subject of the first case which has been related, at the seventh month of her pregnancy, I considered the propriety of puncturing the membranes; but I determined against it. There would not have been the difficulty and even danger in doing so, which in some cases must be encountered in order to perform it, and which, I apprehend, might be sufficient to deter the practitioner from undertaking it. If the cervix were blocked up by cancerous disease, which must be passed through or broken down in order to reach the membranes, causing thereby serious hæmorrhage, then this operation ought to be avoided. But the membranes in my case could be touched, and might have been easily perforated. It appeared to me, however, that pregnancy, instead of aggravating the suffering of the patient, had rather lessened it, and I thought it something to gain two more months of life and comparative relief in a disease which could not but end fatally in a short time. The extent of disease at this time would, in my judgment, have been a most serious obstacle to the passage of a seven months' child, which would have probably needed instrumental assistance for its delivery, and the exposure of the diseased structures to the chance of laceration, and of the mother to the utmost peril. I could see nothing in the delivery of a seven months' child, which could so exempt the woman from danger as to counterbalance the positive benefit of a prospective life of two months to her. I therefore preferred to meet whatever increased difficulty might arise from a large child when labour came on, to bringing on by my own act, a crisis which was full of peril. I doubt the prudence of inducing premature labour in these cases as a rule. On the contrary, the rule with me would be, to leave the whole care of pregnancy and the time of labour to nature, and to do all that I could to alleviate suffering and urgent symptoms, and to preserve to the parent as much as possible of the nine months of gestation, which forms no inconsiderable part of the duration of a case of cancer.

When labour sets in, we must be guided in our choice of the method

[1] Lever (Dr. J. C. W.) Case in Guy's Hospital Reports, April 1842.
[2] Lee (Dr. Robert). Clinical Midwifery. Second Edition, p. 94.

of delivery by circumstances. It is desirable not to interfere, as long as the patient's powers and the strength of uterine action are well sustained in the efforts to dilate the os. It may happen, that suddenly the diseased mass will give way, and the lower portion of the uterus be either rent or detached, and carried before the head in its sudden escape into the vagina. But if the vital powers, already enfeebled by the drain from the diseased part, begin to fail, and the os uteri be still insuperably rigid and undilated, it has been recommended to make incisions through the obstructing portion, with the hope of giving room for the passage of the fœtus. In the two cases above related, this procedure appeared to be quite impracticable. The whole circle of the cervix was so implicated in the disease, and the indurated matter was so deep and massive, that there was no edge to cut, and an incision would have merely inflicted a wound upon the diseased structures and have caused them to bleed, without opening a way for the escape of the child. Any surgical operation of this kind, to be effectual at all, would require the cutting out of a mass of the cancer, which would be hazardous in the extreme, and indeed impracticable. Incisions through the cervix are only available for the purposes of delivery in those extremely rare cases when the cervix-tissue is hard and unyielding, but not from cancer (unless in a very early stage), and does not open under the forces of labour, which may have been spent upon it until the cervix is inflamed, and the female well nigh exhausted. The os may then be dilated by the knife, and the operation is well-defined, easy of accomplishment, and, as far as it has been performed, effectual in its purpose.

Abandoning therefore the idea of incision in these cases, there is the alternative between craniotomy and the Cæsarean section. The second case terminated as favourably by the first operation as could have been expected, but still it ended with the birth of a mutilated child, and the death of the mother one month afterwards. Had the disease made a little more progress, had it been as great as in the first case, the woman, in all probability, would have died undelivered, so difficult would it have been to remove the child by the crotchet, with the feeble endurance of the patient. I cannot but think, that the immediate risk of death to the mother, when the disease is much advanced, setting aside all consideration of the child, is as great in delivering by craniotomy as the Cæsarean section; and on the score of suffering, the latter is certainly the most favourable. When, however, after a careful study of the case, there is a prospect of delivering through the natural passages (as in Case II), although it be discouraging, and, at the best, must be attended with great risk, yet it is desirable to give the preference to it. But if the patient's powers seem quite unequal to sustain the shock and suffering of a protracted delivery through structures which will bleed and lacerate, and if the *fœtal heart is heard to beat*, I think that the Cæsarean section offers a speedy and a certain delivery, with no greater hazard, imminent though it be, and at the same time may rescue the child. The preservation of a child's life, under circumstances of hopeless disease of the mother, ought to turn the balance in the consideration of the means employed in its favour. In such cases, auscultation of the abdomen, to hear the fœtal heart, on which alone we can safely rely for the fœtus being alive,

ought to be attended to. This ought to be ascertained in any case so complicated, during that part of labour which is entrusted to the natural powers, because the sudden death of the mother from rupture of the uterus, as in Case 1, or from sudden and rapid exhaustion, may require the abdomen and uterus to be opened to save the child. A want of preparation, and an uncertainty as to the life of the child, may just let the moment slip by in which the child might be preserved.

The moderate inhalation of chloroform, in cases of this kind, would be most desirable; but the friends of the patient ought to be clearly apprised of the chance of sudden death from the disease itself, so that, should it happen, it may not be ascribed to the chloroform.

13, Devonshire Square, Bishopsgate Street, February 1851.

CASE OF LABOUR COMPLICATED WITH CAULIFLOWER EXCRESCENCE OF THE UTERUS: WITH REMARKS ON THAT DISEASE.

By JOHN ROSE CORMACK, M.D., F.R.S.E., etc.

(Read before the Medical Society of London, Nov. 30, 1850.)

The case which I am about to bring under the notice of the Society is instructive, when viewed in connexion with other recorded cases of the same disease. It calls attention to the use of certain *palliative medicines;* and it likewise brings under our notice *excision* as a means of cure, or of prolonging life when the malady cannot be extirpated. It is also a remarkable case, from the circumstance of both the patient and her husband having been ignorant of the existence of disease, till I discovered it when called in at the end of the natural term of gestation.

During September 1847, I was requested by Mrs. G., aged 30, married for five years, and the mother of one child, to attend her in her approaching confinement, which she said she expected about the end of November. She had had two miscarriages. She said that her general health was good, and that since the third month of her pregnancy she had enjoyed better health than since the birth of her child. Some months before she became in the family way, she had suffered greatly from menorrhagia; and being then in Edinburgh, she went to consult Dr. Simpson. He was not at home, but she saw his assistant, who prescribed, and requested her to return on a future day to see the Professor. Finding great benefit from the medicine ordered (which, I believe, was gallic acid), she did not go back; and had never since asked, nor, as she supposed, required medical advice. She said, that about once a month she had had, during her pregnancy, a slight coloured discharge for a day or two, and also some colourless discharge; but that as this had been the case during her first pregnancy, and as it did not seem to weaken her, she was not uneasy about it.

From the day in September when she asked me to attend her in her confinement, till I was actually called to her in labour on the 28th of November, she never made the slightest complaint to me,

though I saw her frequently. During that period, she took much exercise; and she did so, not only with impunity, but with advantage to her general health.

About 5 P.M. on the 28th of November, I was summoned to attend immediately upon Mrs. G., who, I was informed, was then in labour. Upon my arrival, in half an hour afterwards, at her bedside, I found that she was not in pain; and, according to her own statement, and that of the nurse, she had hardly experienced any symptoms which resembled approaching parturition, except that she had discharged, *per vaginam*, a watery fluid in such abundance as to soak through the bed. I was told that the membranes had been ruptured, and that the waters were still coming in large gushes. As I entered, the discharge was observed for the first time to have given a sanguineous stain to the linen: and on proceeding to make an examination, I found her bathed in blood. She suddenly became very faint; and from the blanching of the countenance and the ebbing pulse, it was evident that the discharge from the vagina was telling rapidly and dangerously upon the vital powers. Upon introducing the finger, I felt—surrounded by soft and imperfect clots—an irregular, tolerably firm, and somewhat elastic mass, obstructing the upper part of the vagina. From the sensation which this mass communicated, and from the alarming way in which blood was flowing, I at first suspected that I had to deal with a case of placenta prævia. A moment, however, sufficed to remove this erroneous impression; for I found that I was easily able to carry my finger round the base of the tumour, and to make out that it did not proceed from the interior of the uterus, but was attached around its orifice, externally, and chiefly to the anterior lip. At this time, the os uteri was just sufficiently patulous to admit the point of the fore finger.

My first proceeding was to inject a strong solution of alum into the vagina; taking care that it reached and thoroughly bathed the os and cervix uteri. I next introduced a compress saturated with the same lotion, and then firmly plugged the vagina. I also had an opiate enema administered by the rectum. She soon fell asleep, and in two hours awoke refreshed, though very weak. During this time, I learned from the husband that the colourless discharge which she had before spoken of to me was watery and limpid, and not like mucus. This was afterwards confirmed by herself; and before leaving the house, I announced to both parties the nature of the case:—that there was a growth from the uterus, from which the water and blood had poured; that the membranes were still unruptured; and that labour had hardly commenced.

At six in the morning of the 29th, I was sent for in consequence of the pains having become sharp and regular. There had been no more loss of blood, and the pulse and general condition of the patient had so much improved, that I resolved to withdraw the plug (which was causing much discomfort), and satisfy myself as to the state of matters by making a digital examination.

The plug was found to be saturated with a reddened fluid, and to yield a repulsive odour, much resembling that of very fœtid lochial discharge. The tumour which had before been large and

turgid, could now be best compared to a superficial roughness, amid which were some more decided elevations. The os and cervix were rather tender to the touch, and so they had been at the first examination, though no sensation was communicated to the patient by freely manipulating the tumour. For the next eleven hours nothing remarkable occurred. There was a great drain from the seat of the disease of a fluid, which may be well compared to dirty and faintly reddened water. This, when excessive, was generally arrested or moderated, by injecting alum and using the plug. At 5 P.M., the labour pains became strong and frequent, but the os uteri did not dilate in proportion, and at this time it felt rigid, and on one side angular. I now introduced within the os a piece of dry sponge smeared with oil. From this time the pains became almost constant, and the dilatation of the os was evidently considerable at 7 o'clock. For some hours there had been little loss of blood; and till 8 P.M. I did not think that any further interference was likely to be required. At this time, however, there was a sudden accession of hæmorrhage; and as the os uteri was now pretty well dilated, I punctured the membranes, and administered three successive doses of the ergot of rye. A living child was born at 9 o'clock; the placenta soon followed; and the uterus contracted naturally. After taking some tea with toast and a little brandy, she fell asleep; and I then left her with pretty a good pulse.

On the following morning, I found that she had passed an excellent night, without requiring to take the opiate draught which I had conditionally ordered. I found the tumour had regained very much of the same character as when I first explored it, though it was much less bulky. It was still destitute of sensation, but around its base there was a good deal of tenderness complained of. Everything went on well till the fourteenth day—the strength increasing, the ability to nurse good and improving. The lochial discharge — or at least a moderate sanguineous discharge—continued. In consequence of local pain, I was asked to examine the womb. I did so, and found a state of matters very similar to what I had found at my last examination. I took occasion, however, to explain the nature of the case, and to hint at the necessity which might arise for operative interference. She, however, could not be persuaded, that if she had so long had the disease without knowing it, it could now be necessary to regard it in so serious a light.

With difficulty she consented to a consultation. About the twentieth day after her confinement, Dr. Henry Bennet saw her along with me; and in consequence of the pain which she felt in the base of the tumour, and the return on two occasions of alarming hæmorrhage, we both agreed that it would be proper to remove the diseased mass, with the portion of the uterus to which it was attached, without much longer delay. She objected, however; and thus much precious time was lost, both as regarded relief from pain, and an ultimate cure.

Some time afterwards, when the disease had considerably advanced, when no sleep could be had at night without an opiate, and when there was a good deal of tenderness in the parts, she was seen by Professor Fergusson, who discountenanced operative interference, from his conviction that it would not accomplish a radical cure. He did not, however, absolutely negative the propriety of the proceeding,

should the sufferings of the patient so increase as to make her desire relief by the knife or ligature. The debility and timidity of the patient increased; and thus much more time was spent. I may here state, that during the first part of this time great abatement of the discharge was obtained by the internal administration of gallic acid; and that pain was restrained within the bounds of endurance by opiates. At last, it was only by an enormous consumption of morphia that life was made endurable; the attacks of hæmorrhage were frequent and frightful; and the whole of the cervix uteri and vagina was excoriated, from the foul discharge with which they were constantly bathed.

On the 6th of February 1848, at the urgent entreaty of the sufferer, Mr. Fergusson removed the diseased mass by the knife, having first put her under the full influence of chloroform, and dragged down the womb within reach. The excrescence was entirely removed, but the incision (though a large portion of the cervix was cut away), was necessarily through indurated structure. The portion of the uterus which was removed, presented hardly any indication of the spongy growth to which it had given a basement. Indeed, the naked eye could only detect a flabby granular surface; and the touch could only recognize hardness of tissue and roughness of surface. A gentleman who promised to make a microscopic examination of the excised parts unfortunately forgot to do so.

Severe sickness came on some hours after the operation, probably dependent upon the chloroform, which had been administered before and during the operation to cause anæsthesia. After this, she improved rapidly in her general health, notwithstanding several pretty severe attacks of hæmorrhage. The dreadful pain had now ceased to torment her; the appetite was good; and she was gaining flesh and strength. In a month after the operation she was able to walk out a little. About this time, however, she began to complain of shooting pains in the back and pelvic region, and occasionally at night was obliged to have recourse to an opiate to obtain sleep. The incised surface till this time had presented a smooth and healthy surface, both to the finger and to the eye; but now, upon examining with the speculum, it was found to have assumed a granular surface. This condition rapidly increased; and within two months from the operation, there was a fresh excrescence, sometimes as large as a pigeon's egg, and at other times not bigger than a hazel nut. From this growth a profuse watery discharge flowed at intervals; and as time advanced, she had every two or three days frightful hæmorrhage, which, on several occasions, had nearly proved fatal. The pain was constant and of the most agonizing character. Besides the free application of belladonna to the sacrum, she took for several weeks before her death so much as three ounces a day of the Edinburgh solution of the hydrochlorate of morphia, in clysters, and by the mouth. Ulceration went on rapidly; and the atmosphere of the room in which she lay was intolerably offensive from the discharge, though deodorizing agents were freely used.

At last this poor sufferer was released from life on the 17th July, the immediate cause of death being exhaustion, from which she never rallied, after one of the attacks of hæmorrhage already referred to. For the last three weeks of her existence these attacks had been so

sudden, so violent, and so frequent, that it had been found necessary to keep the vagina constantly firmly plugged. The parts were bathed with an infusion of opium, once every six hours, and a clean plug was changed at least once every twenty-four hours, but generally at shorter intervals.

Death occurred about seven months and a half after her delivery; and rather more than five months after the operation.

Examination of the Body forty-eight Hours after Death. This I made with the kind assistance of Dr. G. T. Gream and Mr. A. B. Barnes. The emaciation and anæmic condition of the body were excessive. The arch of the pubes was removed, and the abdomen laid open, so that the uterus and adjacent parts might in the first instance be examined without displacing or handling them. The cervix uteri was absent. The vaginal end of what remained of the uterus was ulcerated, as was likewise the whole of the upper part of the vagina. When carefully looked at, the surface of the uterus which had been incised was found to have on it the same flabby granulations or vascular excrescences, which were noticed in the portion removed by Mr. Fergusson. They were rather more florid. The surface on which these growths were implanted was of a hard and almost cartilaginous consistence. The body of the uterus was harder, and rather larger than natural. It was dark—as if stained with a pigment—on its peritoneal surface. The vagina at its upper part was deeply ulcerated, and was easily torn. The urethra, the bladder, the ovaries, and the rectum, were free from disease.

Remarks. It is *possible* that if the operation had been performed earlier in this case, the result might have been somewhat better. Even as it was, life was prolonged, and a brief respite from suffering was likewise obtained. The effect of the gallic acid in restraining the menorrhagia at an early stage of the disease is an interesting fact, confirming what every one in the habit of using this medicine must have observed,—that it rarely, if ever, fails to manifest its anti-hæmorrhagic virtues, even under circumstances apparently the most different It is a medicine which we may almost give *empirically* as a styptic, so wide is the range of its application: in menorrhagia, probably, no medicine is equal to it. Gallic acid, however, though useful in restraining the hæmorrhage depending upon cauliflower excrescence of the uterus, is not a remedy for that disease; which, so far as our knowledge at present extends, cannot, it may be safely stated, be cured by medicines or hygienic treatment.

Can cauliflower excrescence of the uterus be permanently eradicated by the knife or by the ligature? If not, can it be made less painful and less rapid in its course by surgical interference? These are the questions which demand answers.

Unfortunately, cauliflower excrescence of the uterus is not the seat of pain, except in its later stages; and therefore rarely comes under the notice of the medical adviser at that period when complete removal can only be hoped for. The case which I have detailed might have had a very different issue, if the diseased mass and the surface from which it sprang had been excised twelve months earlier,—at a time when the only symptom was the limpid discharge. Had the operation been tried with all convenient speed after delivery, the miserable existence which

the patient had after her confinement might have been ascribed by some to the use of the knife. The case must now, however, be held as proving with all others recorded, that such tumours, though they may long remain pretty stationary, at last inevitably terminate fatally. This fact is of itself a strong argument in favour of resorting to operative interference as early as possible, for it is then, if at all, that the morbid mass can be eradicated. In Mrs. G.'s case, when the operation was performed, a cure was not expected; and the knife was used only with the hope of accomplishing what was attained, a respite from impending death.

On the 3rd of Dec. 1845, Dr. Simpson read before the Medico-Chirurgical Society of Edinburgh a communication upon excision of the cervix uteri, in which he stated that out of eight cases in which he had performed this operation, in three the amputated vaginal portion of the cervix was the seat of what he terms "carcinomatous disease". In one of the cases, one of cauliflower excrescence, the patient had remained perfectly well from the date of the operation in 1840, and in the interval had given birth to and had nursed three healthy children. In a second patient, whose health and strength were greatly reduced, the excised part presented a tumour having all the microscopic and other characters of Müller's *carcinoma fasciculatum*. When Dr. Simpson read his paper to the Society, two years had elapsed since the operation, and the patient was then continuing to enjoy the best of health. In the third case, the diseased cervix presented a well marked specimen of Müller's *carcinoma reticulare*. The patient remained well for eight months, but the disease then recurred, and proved fatal fourteen months after the operation. Dr. Simpson's published experience is therefore an encouragement to operate.

A powerful argument in favour of the propriety and rationality of attempting a cure by operation is to be found in the able researches of Dr. Andrew Anderson of Glasgow.[1] He has shown that cauliflower excrescence is "a disease which cannot spread by simple germs, as ordinary cancer is supposed to do; for, in order to its growth, a regularly formed membrane is necessary, and not merely active cells; and this consideration", adds Dr. Anderson, "renders more probable the success of the operation of removal of the tumour with the portion of the os uteri from which it grows." According to Dr. Anderson, "the basis" of the cauliflower excrescence "is a membrane of extreme tenuity, ramifying most complexly, amply supplied with blood, and possessing the power of forming from that blood a whitish 'cell-substance', which is deposited in a layer around it." He conceives that "the white substance which constitutes the bulk of the structure is formed by the membrane as a matrix, and from the blood with which that membrane is supplied, by a change in the corpuscles." He had no opportunity of examining the characteristic "watery discharge"; but he believes that it will be found to flow from the white substance directly, probably in consequence of the bursting of the external layer of cells, they being as quickly reproduced within; that thus a constant drain from the blood is going on, and made more exhausting by occasional actual hæmorrhage when the tumour happens to be congested, or accidentally injured.

It appears, then, from Dr. Anderson's researches, that cauliflower

[1] Anderson (Dr. A.), Edinburgh Monthly Journal, vol. for 1842, p. 885.

excrescence differs from every known malignant tissue in its mode of growth. "It grows *by imbibition from the blood*, but *beyond the capillaries*." This view of the morbid anatomy of the disease, its uniformly fatal issue when left alone, and the comparative success of Dr. Simpson's operations, would induce me, if consulted at a very early stage, unhesitatingly to advise excision, provided the diagnosis demonstrated the growth to be of that description which Dr. A. Anderson has described. If asked at a later period, I would not advise the same course to be adopted, unless the symptoms were, as in the case of Mrs. G., so urgent as to threaten speedy death; and then, we are not only justified in operating, but imperatively constrained to do so. If an operation be decided against, the proper treatment to adopt would, I apprehend, consist in the use of astringent anodyne injections, and gallic acid as a constitutional remedy. Each case will however demand its own special appliances.

The question as to the disease being hereditary I do not now enter upon. I may state, however, that the mother of my patient died from what was described to me as "cancer of the womb".

Essex House, Putney, November 1850.

THE CHARACTERISTIC PECULIARITIES, PATHOLOGY, AND TREATMENT OF RHEUMATISM,

MORE PARTICULARLY AS IT IS FOUND PREVAILING WITHIN THE TROPICS.

By JAMES BIRD, A.M., M.D.

Improved views of the humoral origin of Rheumatism have from time to time arisen, to claim the attention of the profession; and the exclusive opinions of solidism, from the beginning of the present century, have been gradually giving place to that more eclectic and rational system of pathology, which looks not on diseases as confined to particular organs or tissues, but as the manifestations of more general and deep-seated lesions, to be sought for in the abnormal deviations of the blood, and the perverted actions of the nervous system. Among those whose judicious observations have tended materially to improve our knowledge of this subject, the names of Drs. Todd and Bence Jones stand prominently forward, as worthy of honourable mention. There is yet, however, much left for study and analysis in the natural history of the disease, particularly as it is found prevailing within the tropics, among a class of patients subsisting almost exclusively on non-azotised articles of diet. Excepting fever and cholera, there is no disease which proves more fatal to the sipahies of our native army; nor is there any which annually renders so many Native and European soldiers unfit for the active duties of their profession, by placing them on the invalid or pension list. Tropical climates seem to have considerable influence in modifying the character of rheumatism among the people of India; and the completion, in that country, of a truly philosophical investigation into the chemical pathology of this and other diseases, might be attended with useful results, in helping us to ascertain the true nature of the rheumatic diathesis, its modifications

under climate, and the relation of rheumatism to other diseased conditions. In this country, too, the practice pursued in rheumatism is undefined and somewhat empirical; one employing lemon-juice, another colchicum, and a third a purely alkaline treatment, without any explanation of the principles, or differences of diseased condition, on which such opposite systems of treatment are recommended. It is therefore matter for wonder and regret that, with the exception of the late Dr. Malcolmson in his *Essay on Beriberi and Rheumatism*, and Dr. Geddes in his *Clinical Illustrations of Indian Disease*, almost every writer on tropical diseases has passed over, without notice, this prevalent and important complaint. The latter author states, that he found rheumatic cases formed about one-eleventh part of all other complaints admitted; and that, during the five years he was in charge of the Madras European Regiment, 457 cases were admitted; of which, the detailed records of 312, including relapses, and occurring in 160 individuals, formed the subject of his statistical remarks and experience. Regarding the seat of the disease, he observes: "On a general review of the whole, forty-seven individuals are discovered to have been subject, either in their primary or relapsed attacks, to rheumatism, both in the muscles and ligaments; forty-three had those structures affected along with that of the periosteum; twenty-eight and twenty-three had respectively disorders of the ligaments, or of the muscles only; in five individuals the disease was confined to the periosteum; in eight this structure was attacked with that of the joints, and in three with that of the muscles only. In the remaining three, the disease was chiefly of a neuralgic character, attended, in two, with rheumatism of the ligaments and muscles."

In the narrow compass of this paper it would be impossible to enter on a complete consideration of the several points connected with the rheumatic diathesis, its paroxysmal progress, and local manifestation in particular organs: I must, therefore, confine my present observations to—1st. Leading varieties of tropical rheumatism, and the points in which articular rheumatic inflammation differs from simple suppurative inflammation. 2nd. Origin of the rheumatic diathesis, nature of the paroxysmal fever accompanying articular inflammation, and causes which produce them. 3rd. The general principles of treatment.

I. LEADING VARIETIES OF TROPICAL RHEUMATISM, AND THE POINTS IN WHICH ARTICULAR RHEUMATIC INFLAMMATION DIFFERS FROM SIMPLE SUPPURATIVE INFLAMMATION.

Tropical rheumatism presents two principal forms; the sthenophlogistic or acute, and the astheno-cachexial or chronic. The former, in its attack of particular tissues, shews a preference for the compound membranes of a mucous and serous kind; the latter affects the muscular and nervous tissues, and has much of a neuralgic character, accompanied by vitiated nutrition, and wasting of the parts affected. The very acute variety, associated, as in Europe, with pericarditis, or endocarditis, is a form of the complaint seldom presented to observation in India; though cases presenting the ordinary symptoms of heat, pain, redness and swelling of the joints, accompanied by fever, occur both among natives and Europeans. The greater number of such

attacks, however, happen among those who are located in the colder, drier, and more elevated table-lands of that country; while the more common form of the disease, prevalent among the natives, particularly those inhabiting malarious districts, is the astheno-cachectic variety; which, when it assumes the form of periostitis, has all the character of mercurial syphilitic cachexia. This latter has been sometimes named pseudo-rheumatism, though no well founded distinction between it and rheumatic affection of the synovial tissues of the joints has yet been established.

Sthcno-phlogistic rheumatism is generally attended by disorder of the intestinal mucous membranes and abdominal secretions, much constitutional disturbance, and aggravation of the fever and pain at night. It is often associated with hepatic congestion and colonitis; but when the phlogistic symptoms are unsubdued, they are accompanied by much destructive irritation and waste of tissues, total failure of the digestive powers, emaciation, loss of strength, pale anasarcous visage, and other signs of cachexia, so that too active or injudicious employment of bleeding, or of the diaphoretic and purgative treatment, must be guarded against. The following are cases of the stheno-phlogistic kind.

Case I. Joseph Fido, engineer of the steamer *Atalanta*, aged 23, was attacked, on the evening of the 8th August, 1838, by extensive swelling and redness of the left knee-joint, accompanied by tenderness of the parts, and inability to move the limb. The inner edge of the knee was most affected, but the whole presented a puffy elastic swelling of the joint, accompanied by slight heat of skin, accelerated pulse, some degree of headache, furred tongue, and a constipated state of bowels, which had existed for some time previous to the attack. Mr. Sproule, the assistant-surgeon of the vessel, repeatedly abstracted blood from the joint by means of cupping-glasses, caused the patient's bowels to be freely acted on by purgatives, and then administered four grains of calomel, with tartar-emetic solution, three times daily, till the gums became slightly tender from the calomel. This result followed in a few days, accompanied by diminished swelling of the knee-joint and disappearance of all cutaneous redness, with a return of the skin's natural temperature. The joint, which was still swollen, remained incapable of motion. Repeated blistering was had recourse to, previous to his admission into the European General Hospital at Bombay, on the 11th of September. At this time, swelling and thickening of the parts surrounding the joint still existed, accompanied by inability of motion. Straps of mercurial plaster were applied around the joint, iodide of potassium in sarsaparilla decoction was given daily, and purgatives, with the addition of colchicum wine, were administered occasionally. Under this treatment the joint soon resumed its natural appearance and power of motion, and the patient was discharged well.

The next is a case illustrating the same disease as it attacks a native of India.

Case II. Body Sing, private in the 18th Regt. of Native Infantry, aged 30, admitted at Kalludghee, 3rd September, 1835. Complained much of pain in the joints of his upper and lower extremities; swelling, heat, and tenderness of the left knee; pulse 120, firm; bowels re-

ported regular; tongue excited. He took an emetic, which produced vomiting of much bilio-mucous matter; he was afterwards bled from the arm to fifteen ounces, without experiencing any relief from pain. The blood drawn was cupped and a little buffy. From the 5th Sept. till the 10th October, the treatment consisted of small doses of calomel with fifteen-grain doses of Dover's powder, administered at bed-time, followed next morning by occasional brisk purgatives, combined with full doses of colchicum wine. After this time, the knee-joint being very painful, accompanied by loss of flesh, and other symptoms of incipient cachexia, the patient was ordered to take half a pint of compound sarsaparilla decoction, with an equal quantity of warm milk, twice daily. On the 28th following, the health was much improved, and the pain and swelling of the knee-joint were greatly lessened. From the 28th October to the 12th December, when he was discharged to perform easy duty, he took three-drop doses of cajeput oil twice daily, and had his left leg and knee-joint firmly bandaged with flannel. Copious perspirations followed the administration of the oil, giving great relief to the rheumatic symptoms, and a small tender swelling, which made its appearance on the sternum, completely subsided at the same time.

Astheno-cachectic rheumatism is so generally associated with arthritic periostitis and constitutional *cachæmia*, that we must beware of employing long-continued mercurial courses for the cure of even its stheno-phlogistic variety, as these are apt to give rise to much derangement of the primary assimilation and to obstinate forms of periostitic inflammation. This caution is particularly necessary in regard to the mercurial treatment of rheumatism among the natives of India, who, from their more general use of non-azotised articles of diet than the European inhabitants of India, possess less vital power of resistance to the destructive metamorphoses of the tissues, and heedlessly employ cold bathing while under the constitutional effect of mercury.

The periostitis which we meet with in such cases affects the head, the vertebræ, or the sternum, and sometimes the shin-bones; but when the cachexia accompanying it proves fatal, either by diarrhœa, dysentery, or hectic, follicular ulceration of the intestines is generally found associated with the other symptoms. The strong constitutional disposition existing in such cases towards wasting decay and ulceration of particular tissues, originates probably in the disproportionate use of farinaceous articles of diet without a sufficient admixture of azotised food; and the extreme irritability and obstinacy of ulcers among the natives of India may be ascribed, I think, to the same cause. There is good ground for concluding that the frequency of periostitis in Indian rheumatism arises from the enervating influence of climate, malarious causes, and a poor vegetable diet; though its occurrence, consecutively to abused mercurial courses and exposure to cold, is observable among well-nourished Europeans unattended by that defective assimilation and rapid emaciation, which accompany it in native constitutions. Such cases, however, have been generally those of seamen who have been exposed to cold and the use of salt diet, and were received into hospital from the ships in harbour. The constitutions of these men manifested slight signs of a scorbutic diathesis, caused by the

salt diet, and by neglect of those measures for keeping the bowels in a healthy state of excretion. Hence the rapid and well-marked utility in such instances of removing the men from ship-board to a hospital on shore, with the use of fresh meat diet, warm bathing, the necessary employment of purgatives, and an allowance of lime-juice and potatoes.

As cachexia advances in cases of this kind, attended by a complication of rheumatic symptoms, the skin, which becomes harsh and dry, is covered by white scales, or papular eruptions, having all the character of obstinate psora. The intimate sympathy existing between the epithelial covering of the intestinal mucous surfaces, and that of the skin, helps us to an explanation of the occasional association of cutaneous eruptions with derangements of the primary assimilation and intestinal mucous surfaces, as observable in the different forms of arthritic complaints. This deranged condition of the digestive organs and skin may be found co-existing in most cases of phlogistic and cachexial rheumatism; but one or other of these has precedence and predominance in the complaint, just in proportion as there exists some original defect in the assimilating power of the one, or the eliminating function of the other.

The intimate relation that subsists between milder and modified degrees of scorbutic *dyscrasia* and the forms of *astheno-cachexial* rheumatism, has of late years been almost lost sight of; notwithstanding that the great and accurate observer, Sydenham, described a species of rheumatism resembling scurvy in its capital symptoms, and requiring nearly the same method of cure; and which he distinguished by the name of scorbutic rheumatism. This species of the disease will be found, under ordinary circumstances, on ship-board, and among European sailors, using in excess salt-meat diet, with little or no admixture of succulent vegetables; as well as among bodies of men, on land, living on farinaceous seeds destitute of anti-scorbutic properties, or on a diet of unvaried character with total abstinence from animal food. Such are the circumstances, aided by extreme aridity or dampness of climate, under which land scurvy prevails among prisoners in the jails of India, and also among bodies of native troops, in particular seasons and localities. The same unvaried farinaceous character of diet, used by many of our sipahies, predisposes them to attacks of cachexial rheumatism. In the eighth volume of the *Calcutta Medical Society's Transactions*, there is an interesting account, by Messrs. Ross and Macnab, of this kind of land scurvy, as it appeared in 1834, among the native troops at Nusseerabad. Many of the cases appear to have been of a mixed scorbutic and rheumatic character; and so closely, says Mr. Macnab, did the excruciating pains of the extremities simulate rheumatism, that, in some instances, the distinction could not well be established; and even when tumefaction took place about the joints or in the periosteum, the difference was by no means distinct. Removal of the patient from the station, and change of air, were attended by well-marked benefit; and the transition from an arid to a milder and more humid state of the atmosphere was followed by amelioration of the malady among the troops.[1]

Case iii. William Collier, baker of the ship *Herefordshire*,

[1] Transactions of the Medical Society of Calcutta, vol. viii, p. 118.

aged 26 years, was admitted into the European General Hospital, at Bombay, on the 8th Dec. 1836, complaining of swelling, pain, and stiffness of the large joints, more particularly the elbows, accompanied by loss of appetite, leucophlegmatic countenance, and tenderness and enlargement of the right tibia. He had been more or less affected, on ship-board, by these symptoms for the three previous months, had gradually lost flesh, and used nothing but friction with camphorated liniment to the swelled joints. He was ordered to take half a pint of compound sarsaparilla decoction, with three grains of iodide of potassium twice daily, along with three ounces of diluted lime-juice, and was placed on the chicken diet of the hospital, with half a pound of potatoes. His health gradually improved; the swelling of the joints, and the tenderness and enlargement of the tibia disappeared; and the patient was quite well by the 2nd of December, twelve days after his admission.

Case iv. James Cleet, aged 30, seaman of the ship *Herefordshire*, was admitted into the European General Hospital on the 7th Dec., 1836, complaining of nearly the same symptoms as the last-named patient, with the addition of some livid spots on the calf of his left leg. He was treated by four ounces of bark infusion, given twice daily, and acidulated with diluted sulphuric acid; used a warm bath at bed time; had the same diet, with an allowance of lime-juice, as the former patient, and was quite well in fifteen days after the date of his admission.

The next case is a still better illustration of the intimate relation between milder degrees of the scorbutic diathesis, and the forms of astheno-cachexial rheumatism.

Case v. John Reid, seaman, government steamer *Atalanta*, aged 26, was admitted into the European General Hospital at Bombay on the 1st Nov. 1839. He had rheumatic periostitis of the head and sternum, accompanied by pyrexia. The pyrexia was subdued by the warm bath, mercury and chalk, with Dover's powder and purgatives. Was soon after attacked by pain in the cardiac region, unaccompanied by any abnormal sounds of the heart. This was removed by looseness produced by the use of antimonial mixture and colchicum, two ounces of lime-juice being allowed him daily at the same time. Subsequently to this, quinine solution was given twice a day, with an anodyne at night; but the periostitis of the scalp returning, accompanied by pain at the base of the occiput, it was thought necessary to omit for a time the quinine solution, to abstract blood from the temples and nape of the neck, and to apply a blister over the cervical vertebræ from the base of the skull. After a time, the quinine solution was resumed with good effect, and the patient was discharged free from pain, and with a recommendation that he should be sent to England, as he was much debilitated and unfit for duty in a tropical climate. A month previous to his admission, he had been discharged from the hospital cured of a somewhat similar attack, accompanied by scorbutic symptoms.

The graduated forms of rheumatism just described derive most of their difference from constitutional causes of distinction, and the less or greater aberrations of the blood from its normal state; but the distinctions of this disease, according to its seat in various parts, though not affording like important grounds for opposite therapeutical prin-

ciples and modes of treatment, are still of utility in directing the mind of the practical physician to important local differences, associated with equally well-marked gradations of the constitutional symptoms which attend them. The chief varieties of tropical rheumatism, founded on such locality, are those divisions of the disease which have been adopted by M. Chomel. 1. Articular rheumatism, or rheumatism of the joints; 2. Muscular rheumatism, or rheumatism of the voluntary muscles; and, 3. Visceral rheumatism, or rheumatism of certain fibrous tissues situated within the splanchnic cavities. The generality of cases belonging to the first form, as met with in the tropics, oftener present symptoms of the mild chronic variety, than of the intense articular rheumatism of European climates; and though attacks are generally ushered in by febrile symptoms, these symptoms are of less severity than in colder climates, and the disease is less mobile in character. Muscular rheumatism, too, though met with in every part of the body, and usually more amenable to treatment than cases of the articular form, is more frequently met with in the loins and muscles of the limbs than in any other part of the sarcous tissues. This is peculiarly a disease of malarious districts, being very prevalent among the men of native regiments when located in such places.

The following extract from my quarterly report, on diseases of the 2nd Troop Horse Artillery, for 1822, then stationed at Kaira, in Guzerat, embraces the leading particulars of this variety of rheumatism, as we meet with it among Europeans. "The patients complained of severe pain in the joints, tenderness of the plantar fasciæ, and sometimes of the bones, or sharp lancinating pain beneath the sternum. There was seldom any swelling of the joints, but the muscles leading to them were painful when pressed, and were affected, in one case, with cramps. The disease appeared to be connected with considerable derangements of the biliary function; but the appetite was not in any case much impaired. Only two patients felt pain from pressure in the region of the liver; but tenderness of the sternum was a common symptom, and there was generally some variation of the stools from their natural yellow colour, indicating more or less derangement in the secretion of bile. All those who suffered from this disease had been much debilitated by intermittent fevers, or biliary affections, in the previous months." In general, articular rheumatism of the tropics is of the mild stheno-phlogistic character, while the muscular variety is of the astheno-cachexial type.

Did time or the limits of this paper permit, I could adduce many interesting illustrations of these several local forms of tropical rheumatism; but I must now proceed to inquire whether the phenomena of this disease be identical with those of inflammation and the phlegmasiæ. While rheumatism sometimes appears with all the phenomena of the phlegmasiæ, such inflammation still possesses a specific character, and is in its nature more symptomatic than idiopathic, manifesting in its progress that the local symptoms proceed from a particular constitutional taint, which gives to them a character distinct from that of simple inflammation. This taint may not always affect the joints, but successively various tissues of the body. The mobility of rheumatic inflammation, or disappearance from one part and appearance elsewhere; its pain, too, the manifestation of a constitutional

cause, being frequently diminished by compression and rubbing; its want of determinate progress and limit of duration; its tendency to periodicity and aggravation at night; its extreme susceptibility of impression from changes in the air and of electricity; and its readiness to return after errors of diet or exposure to cold, are all proofs that simple inflammation does not constitute the disease, but that it proceeds from a specific cause associated with abnormal sensibility of the nerves. Though the disease, therefore, generally presents quite as much the character of the neuroses as of the phlegmasiæ, evidence is not wanting to prove that acute articular rheumatism sometimes terminates in suppuration and purulent effusion into the joints affected. Few as these cases are, they are important proofs of the necessity of attending, in our treatment of this disease, to therapeutic means for subduing both local and constitutional symptoms. M. Bouillaud, in his researches on articular rheumatism, instances cases of the disease terminating in suppuration; and in a late discussion on this subject, before the Academy of Medicine, M. Andral brought forward the case of a woman, (who died at the Charité in Paris), whose shoulder-joints, after a severe attack of pneumonia, had been the seat of simple and complicated acute rheumatism. The patient, who was aged, had died in about eight days without an apparently sufficient cause. The interior of both scapulo-humeral articulations contained homogeneous pus, similar in character to that which is the result of phlegmonous inflammation. The surfaces presented innumerable minutely injected vessels, forming the closest network, except on the articular cartilages, where this injection was but slightly marked. The bursæ about the joints were also filled with pus. The parts external to the joints, as the muscles and ligaments, were in their normal condition.[1] In other cases, lesions of the synovial membranes, cartilages, and extremities of the bone, appearing to be of an inflammatory nature, have been found; but as these are not constantly connected with the rheumatic affection, they are not to be regarded as its anatomical cause, and must rather be considered as an effect.

II. ORIGIN OF THE RHEUMATIC DIATHESIS, NATURE OF THE PAROXYSMAL FEVER ACCOMPANYING ARTICULAR INFLAMMATION, AND CAUSES WHICH PRODUCE THEM.

Rheumatism may be generally considered a result of pre-existing lesion of the assimilating and excretory organs of the body; which, on the application of cold, errors of diet, intoxication, malaria, and like exciting causes, gives rise to that anormal change of the blood which constitutes the rheumatic diathesis. The sudden or continued influence of damp cold air, producing a powerful impression on the skin and nervous system, may in European rheumatism be considered the first link of the chain of changes connected with the generation of the *materies morbi* in the blood. The equilibrium of healthy nutrition is disturbed, the tissues cease to appropriate true nutritive materials, the assimilating functions of the stomach and collatitious viscera are deranged, and the eliminating excretory action of the liver, skin, and kidneys, further impaired or suspended, so as to admit of effete

[1] London Medical Gazette, vol. xlv, 1850, p. 304.

and imperfectly oxydized materials reverting into the circulating fluid. The two former cease to remove from the blood the healthy proportion of carbonised principles, and the constitutional disturbance following this state is still further augmented by the azotised products of secondary assimilation being retained in the system, as indicated by the deposition from the urine of various lithates after nocturnal rheumatic paroxysms. In place, therefore, of the lungs and their supplemental organs, the liver and skin, eliminating, in normal proportion, the non-nitrogenous and azotised elements in the form of carbonic acid and urea, there is now a morbid development of cutaneous perspiration, containing lactic acid, with imperfect excretory functional power of the kidneys. The latter having ceased to remove the normal proportion of urea from the system, excrete in its place uric acid and the urate of ammonia, or the imperfectly oxydized constituents of the body.

It may naturally be asked, is the blood altered previous to the appearance of swelling and local inflammation of rheumatism? Though this be a question most difficult of solution, even as regards other inflammatory diseases, the disposition of the circulating fluid to an altered abnormal condition in this disease, usually precedes the development of its local symptoms. We must admit, however, that cold and other causes occasionally produce rheumatism in constitutions little or not at all disposed to the disease, though the reverse be usually the case. In those instances the altered condition of the blood follows the development of the local affection; but, in either case, the physiological opinion of Simon, that the metamorphic power of the blood globules is increased, affords the best explanation of the chemical phenomena of rheumatism; as this heightened metamorphosis of the blood at once accounts for the greater relative formation of fibrin, and the progressive diminution of hæmato-globulin, as they occur in rheumatic fever and its consequences. The natural tendency of rheumatism is to *anæmia*, and to the production of phenomena, connected with a diminution of the blood globules, as lately prominently noticed by Dr. O'Ferral, in his observations on rheumatic cases with endocardic complications; where, after the employment of depletion and mercury, a cardiac bruit, different from that which originally presented itself, continued to persist, notwithstanding the steady employment of means for subduing inflammatory action.[1]

That morbid condition of the blood, which constitutes the *rheumatic dyscrasia*, occurs in all cases where the circulating fluid either becomes deteriorated by the absorption of foreign poisonous matter, as in gonorrhœa, and in certain exanthematous diseases, accompanied by primary and secondary symptoms; or by the reversion into the blood of increasingly morbid secretions, as in uterine affections that give rise

[1] One of the most important bearings of improved physiological knowledge is on pathology and the primary element of diseased condition; and though our facts on the subject of blood-diseases be yet limited and undetermined, there is much reason for the belief, that the healthiness or unhealthiness of the blood itself depends on the greater or less perfection of its cell-development, and that wherever its colouring matter, *hæmatin*, is defective in quantity, or depraved in quality, it proves incapable of fixing the oxygen of the inspired air, and thus gives rise to perverted nutrition of parts, defective calorification, and ultimate anæmia.

to those diseased conditions, and which, though now fashionably treated as local disease by caustic and other like applications, are often, indeed, symptomatic of an acquired state of constitutional dyscrasia. Dr. Geddes, in his excellent clinical illustrations of Indian disease, observed that neither heat, rain, nor cold, appeared to have any reference to the prevalence of rheumatism; but that, in individuals possessing constitutional peculiarities, pseudo-syphilitic virus gave a tendency to the occurrence of rheumatic inflammation, aggravated in some cases by the exhibition of mercury. Impaired primary assimilation, defective clothing, and malarious locality, or whatever other causes, having a tendency to render defective normal excretion, seem to materially aid the absorption of such foreign matters, and to produce, in India, rheumatic cachexial affections of the utmost intensity. Such defective excretion gives rise to the undue production of lactic acid in the body; depending, as Dr. Bence Jones has shown, in some of the stheno-phlogistic cases, on excessive ingestion of azotised food; and, in those of an opposite kind, on the introduction of an insufficient amount of oxygen into the system, and on defective elimination through the excretory organs. In both cases, the urea, which is the produce of the molecular decomposition of the muscular and azotised tissues, is partly converted into uric acid and urate of ammonia, and appears in the urine as a fawn-coloured lateritious sediment.

The anatomical seat of rheumatism is peculiarly confined to the fibro-serous tissues, including the articular capsules, cellular tissue, mucous follicles, synovial glands, the interior ligaments of joints, the muscles and tendons, the dura mater as reflected on the medulla oblongata and spinal cord, the pleura, the peritoneum, and nerve tubules. The localized manifestations of disease are accompanied, according to age, temperament, and previous habits, by almost opposite conditions of the blood, states of *hyperinosis* and *hypinosis;* which differences of constitutional cause give the rheumatic swelling of the joints more or less the character of ordinary inflammation. The local swelling of stheno-phlogistic rheumatism differs from ordinary inflammation in having more a character of irritation than the latter; but, according to the researches of M. Andral, agrees with it in this, that the fibrin in the blood increases from two and a-half or three to as much as ten parts in one thousand, oscillates in the sub-acute form between four and five, and returns to the natural standard in well marked chronic cases. This state of *hyperinosis* is, however, rather relative than absolute, being accompanied by a corresponding diminution of the red corpuscles; which, as Simon supposes, are wasted in the metamorphic production of the fibrine. The following table exhibits the relative increase of fibrin to the ratio of *hæmato-globulin*, both in rheumatism and scurvy, as compared with healthy blood, by which a well-marked analogy between the conditions of rheumatic and scorbutic *dyscrasia* is at once indicated. *(For Table, see next page.)*

Rheumatic paroxysmal fever, which is associated with much irritation, may be considered the manifestation of the rheumatic diathesis in the various tissues, brought on by the action of cold on parts, so that the condition of healthy nutrition is suspended, and hyperæmia with swelling, or inflammation of a destructive kind begins. The pain is accompanied by numbness, and the redness and swelling are

Blood and Diseases.		Water.	Blood Corpuscles.	Fibrin.	Albumen.	Fatty matters.	Salts and extractive.	Density of defibrinated blood.	Density of the Serum.
Healthy blood according to Becquerel and Rodier	Max.	800·0	152·0	3·5	73·0	3·255	8·	1062·0	1030·0
	Min.	760·0	131·0	1·5	62·0	1·000	5·	1058·	1027·
	Mean	779·0	141·0	2·2	69·4	1.600	6·8	1060·2	1028·0
					Residue of serum, including albumen, fatty matter, and salts.				
Rheumatic blood from 14 individuals, and in 43 analyses, according to Andral and Gavarret	Max.	839·6	130·0	10.2	—	—	—	104·8	—
	Min.	771·6	70·1	2·8	—	—	—	76·9	—
	Mean	805·0	101·0	6·7	—	—	—	86·0	—
							Salts and solid constituents.		
Scorbutic blood, from three well-marked cases, according to Mr. Busk	Max.	849·9	47·8	6·5	84·0	—	9·5	150·1	—
	Min.	835·9	72·3	4·5	76·6	—	11·5	164·1	—
	Mean	846·2	60·7	5·9	74·2	—	10·9	153·8	—

often slight in comparison to its degree. A specific anormal change of the blood, and a greater alteration of the nervous force than occurs generally in simple inflammation, sometimes amounting to anæsthesia of the parts, or accompanied at others by greatly increased nervous sensibility, seem to mark the condition and progress of rheumatic inflammation. In one remarkable case of a seaman named John Brickle, aged 25, who had remained for four hours together under water while in the Persian Gulf, the rheumatic symptoms and tenderness of the voluntary muscles were preceded by well-marked peripheral anæsthesia. This patient was cured by an almost daily use of warm bathing, diaphoretics and purgatives, with friction and light flannel bandages to the limbs. The change of air, too, from the Persian Gulf to Bombay, exerted no small influence in improving the general health and removing symptoms of disease.

The irritative fever accompanying local rheumatic affection, sometimes precedes or simultaneously occurs with the symptoms of pain, stiffness and swelling of the joints; sometimes it is ushered in by chills, followed by heat of skin, frequency of pulse, and other pyrexial symptoms. More frequently, however, and particularly in malarious districts, the febrile symptoms are of an obscure hectic kind, presenting no very definite character; being marked, however, by nightly insomnia, aggravation of the pain, restlessness, and slight morning perspirations, which seldom bring much relief from the painful affections of the joints and muscles. The patients, when unrelieved, continue to lose flesh and strength, their muscles become attenuated, and their skins covered by various kinds of eruptions, as mentioned in the previous section. In such cases, particularly those of natives of India, change of air, and relief from the night watches and duties of a soldier, are followed by complete restoration of the persons to health, without any therapeutic means beyond a return to the diet and air of their native villages, with complete exemption from labour and fatigue.

We learn from Dr. Geddes's statistical experience of this disease in

India, that fever existed in less than one-third of his cases; was as common in relapses as in primary attacks; and was not more confined to one local variety of the disease than another. In one half of the patients who had fever, it existed only for a short period, and was, in the remainder, either slight or irregular. According to my own observation, there is generally an apparent disposition in rheumatic fever, like that accompanying exanthematous diseases, to subside after the local appearance of diseased action in the tissues. Though the febrile symptoms and pain will often be found to abate and increase irregularly, without any well-marked degrees of severity between the proportion of the local and the constitutional affection.

III. TREATMENT.

The general therapeutic principles to be followed in attacks of tropical and European rheumatism, are—1. to subdue constitutional irritation and fever by bleeding, narcotics and refrigerants. 2. To eliminate from the system the retained cholæic elements, and other excrementitious matters of the blood, which render the urine acid, and occasion its lithic deposits. 3. To restore the condition of normal nutrition by suitable diet in the stheno-phlogistic kinds; and by iron, cod-liver oil, and tonics, when the rheumatic symptoms are associated with *cachemia*. 4. To subdue local symptoms of swelling and pain by leeching, cupping, and blisters, followed by anodyne applications, or local anesthætics.

In order to fulfil the first indication, which is the principal and leading one, in cases of the stheno-phlogistic kind, much professional discussion and difference of opinion have arisen, regarding the efficacy and propriety of general bleeding, as one of the means. The extent to which this remedy may be usefully employed, will depend much on the youth and naturally plethoric constitution of the patient, the inflammatory character of the local affection, the severity and tonic nature of the accompanying fever, and the purity and bracing influence of the air to which the patient has been habitually exposed. The degrees of fever are found to correspond generally to the coldness and purity of the air in which the patient has lived, the azotised richness of his diet, and the proportionate *hyperinosis* of the blood accompanying good air and rich nourishment. In a general inflammatory diathesis, therefore, the propriety and efficacy of general bleeding are fully established by our own experience, and recommended by a host of unexceptional authorities. But the natural tendency of rheumatic inflammation and fever being to produce anæmia, we must not be too prodigal in wasting the nutritive resources of the constitution; and should be guided in repeating the bleeding, according to the quantity and inflammatory firmness of the blood-clot, and the effect which the first bleeding may have had in subduing irritation and mitigating fever. The same extent of general blood-letting, that might be useful to the temperate and well-fed inhabitants of cold salubrious localities, would be highly injurious to the nervous irritable bodily habits, of those addicted to excessive beer drinking and other dissipated practices. The same quantity of blood, then, abstracted to cure quickly the plethoric mountaineer of Scotland, would endanger the life or render tedious the convalescence of an inhabitant of London, breathing an atmo-

sphere deteriorated by sulphuretted hydrogen. The necessity, too, of general bleeding in tropical rheumatism is rather an exception than the rule, as might be expected from the comparatively mild character of its fever and inflammatory symptoms.

To carry out further this indication, after a moderate bleeding, recourse may be had to ten-grain doses of nitrate of potash, given along with small doses of tartarized antimony and citrate of potash, three or four times a day, in the form of effervescing draughts. Or the nitrate of potash may be combined with nitrous ether and other diuretics; the intention in either case being to subdue heat and irritation, by restoring the normal excretory functions of the skin and kidneys. The utility of nitrate of potash seems dependent on its power of diminishing the plasticity of the blood and suspending the metamorphic disposition of the blood-globules to produce fibrin. Under its use, the specific gravity of the urine is increased, this being a medicine which possesses the power of eliminating urea and other compounds of lithic acid from the system. Such power is probably increased by the combination of nitrate of potash with other alkaline compounds, as the citrate and acetate of potash, which are converted into carbonates in the course of the circulation. All such means, however, prove refrigerant by subduing the heat and irritability of the body; and the effect of such may be greatly increased by the addition, at bed-time, of anodynes, either opium or aconite.

Of medicines best adapted to carry out the second indication, calomel and Dover's powder at bed-time, followed, next morning, by a solution of sulphate of magnesia in compound senna infusion, with the addition of an alkali and colchicum, will be found among the most useful. Much misapprehension regarding the beneficial therapeutic action of the latter medicine seems to exist, some deeming its chief efficacy consists in its power of eliminating urea and uric acid from the system; while others deny to it any efficacy in subduing symptoms of true rheumatism. It is chiefly useful in cases of the acute disease, accompanied by a foul loaded tongue, biliary derangement, and intestinal mucous accumulation. Both my Indian and European experience have convinced me of the fact, that without its purgative effect being induced, the urinary secretion is seldom so much increased in quantity as to bring with it any considerable relief of rheumatic symptoms. The most beneficial mode of administering it in India is to give the wine of colchicum, twice or thrice a day, in a weak solution of tartarised antimony, along with liquor potassæ, and tincture of the hydrochlorate of morphia. Free action of the kidneys and skin is thus kept up, and the feverish frequency of the pulse reduced; but, even in such a case, the use of purgatives, and the elimination of the biliary secretion, must not be neglected or lost sight of. Where diarrhœa, or the purgative effect of colchicum is established, there the amount of urea and uric acid in the urine appears to be diminished; these compounds being eliminated, as would appear by the intestinal evacuations. Dr. Boecker, in a late minute examination of the action of various medicaments, with reference to the changes produced by them in the constituents of the urine, the exhalations of the lungs, and the blood, found that, contrary to the general opinion of pharmacologists, the use of colchicum produced but slight diuretic action,

and had very little effect on the constituent parts of the urine. During its employment, the activity of the skin and lungs, in exhaling carbonic acid, is considerably augmented, and after a time its effect in causing an augmented secretion of bile becomes apparent; the melanotic blood globules, which are unable to combine with the oxygen of the air, being destroyed in the hepatic system, afford materials for an augmented secretion of bile. The result of his analyses, thirteen in number, on the action of colchicum, and its known utility in rheumatism, seem to bear strongly on the truth of the opinions expressed as to the pathological nature of this disease.

The employment of calomel, with a view of obtaining its full purgative effect in cases of the stheno-phlogistic variety, should be more steadily pursued to carry out this indication than the plan of giving it with opium, in order to obtain its constitutional effect. From its special action on the biliary organs, it is in Indian rheumatism an invaluable remedy; and in this country too, when properly administered, in aid of colchicum and other purgatives, will be found of much utility, by depurating the blood, through increased biliary secretion, in those hypercarbonised states of the system associated with the disease in many of those cases met with in London. The practice of mercurial fumigation, as successfully used both in this country and in India, proves useful by increasing the elimination from the skin, and restoring the cutaneous functions to a normal state. The same result may be partially secured in both varieties of the disease, by means of warm bathing, warm clothing, and friction of the surface.

The third indication has more immediate relation to cases of the astheno-cachexial kind than to those of acute rheumatism. The impaired state of the digestive function being so intimately associated with the origin and progress of the rheumatic constitution, it is of much importance, while carrying out the second indication in acute varieties of the disease, that due attention should be given to the diet of the patient, which must be diluent and of easy assimilation. In the early stage of disease it should consist of gruel, thin arrow-root with milk, or weak broth; and if beef-tea be allowed, it may be given with the addition of twenty or thirty drops of liquor potassæ; the alkali serving to neutralise the lactic and other acids which accumulate in the stomach along with diseased mucous secretions. As phlogistic symptoms, even in the worst examples of acute Indian rheumatism, are associated with much destructive irritation and waste of tissues, a too active or injudicious employment of the diaphoretic and purgative treatment must be avoided, as it will both derange the primary and secondary assimilation. Such derangement is marked by emaciation, loss of strength, pale anasarcous visage, and other signs of cachexia; and as the early appearance and rapidity of such symptoms are most remarkable in persons inclining to the leuco-phlegmatic temperament, the treatment for carrying out the two previous indications should not be such as makes too great a demand on the resources of the constitution. When cachexia appears we must have recourse to bark, sulphate of quinine, preparations of iron or iodide of potassium, all of which operate beneficially on the constitution, by improving the tone of the organs of primary assimilation, modifying the nutrition of the tissues, and increasing the *hæmatin* of the blood. A combination of

these several remedies may be necessary, according to the nature of particular cases; and where iodide of potassium, if given alone, would utterly fail in relieving symptoms, it may be usefully employed in combination with the decoction of bark or sarsaparilla, or extract of taraxacum; by which the double effect of healthy cutaneous action, and increased elimination by the kidneys, may be generally secured. The iodide of potassium must not be given in large quantities, but along with it laxatives are as essential as in using colchicum. In many such cases, the compound decoction of sarsaparilla, to the extent, at least, of half a pint twice daily, with an equal proportion of warm milk, has been found to be of much utility in promoting the nutrition of the tissues, and bringing back healthy cutaneous action. The extract of sarsaparilla in pills, with resin of guiacum and sulphuret of antimony, may be given advantageously with the same object; care being taken to supply the patient with light easily digested elements of nutrition. Among such elements we may mention cod-liver oil, which in two cases, when prescribed in this country, proved of much benefit. One of these was a case of excruciating pericranitis, affecting the aponeuroses of the cervical vertebræ, and accompanied with neuralgia of the superior maxillary branch of the fifth pair of nerves; the other was hysterical neuralgia of the intercostal muscles. In both cases counter-irritation was employed by means of a liniment of oil of turpentine with pyroligneous acid over the pained parts; and, in the former, the oil was given along with the extract of aconite at bed-time.

The last and fourth indication is to employ remedies suited to subdue the pain and swelling of the local affections. If such are of a muscular kind, strongly stimulating terebinthinate liniments, warm fomentations, and shampooing of the parts, will be found beneficial in relieving pain; but in some cases, such was its severity and persistence, that the patients were relieved by nothing except the abstraction of blood from the parts by means of cupping-glasses. When the joints suffer, and are much pained and swollen, we found no local applications more useful than leeches and repeated blisters to the parts. If the latter be employed, the blistered surface may be dressed with an ointment containing small quantities of the hydrochlorate of morphia, or extract of belladonna. The application also of a wet bandage, saturated with a lotion of camphor mixture, wine of colchicum, and tincture of the hydrochlorate of morphia, covered over by cotton wool and a piece of spongio-piline, to prevent evaporation, will be found of much utility. Others have of late recommended for the same purpose a chloroform lotion, or one of Dutch liquid, stating such to be of great utility in relieving the pain and swelling of the joints; but though we have had no experience of their efficacy, they appear well calculated to fulfil the same intentions as other like remedies which have been long in use. More might be said as to the degree of efficacy of special remedies; but as we place little faith in such, when used without discrimination, we defer their consideration to a more fitting opportunity, the great object of this paper being to delineate the leading characters of rheumatic disease, and the therapeutic indications most applicable to each.

Hyde Park Square, February 6, 1851.

ON THE DIAGNOSIS, PROGNOSIS, AND TREATMENT OF SYPHILITIC ERUPTIONS:

WITH ESPECIAL REFERENCE TO THE USE OF MERCURY.

By THOMAS HUNT, Esq., M.R.C.S.Eng.

DIAGNOSIS OF SYPHILITIC ERUPTIONS.

It is very important to ascertain whether an eruption be syphilitic or not. But this investigation has nothing to do with the distinction between papules and scales, pustules and tubercles; for the poison of syphilis is capable of producing almost every form of eruption. Neither is it wholly a question of colour. The copper-colour, so strikingly characteristic of venereal affections of the skin, is by no means invariably present; nor is every copper-coloured eruption syphilitic in its origin, the hue of the affected portions being materially modified by the natural complexion of the patient. The diagnostic signs of syphilis do not lie on the surface, although the first glance frequently excites well-grounded suspicion. We must appeal to the history rather than to the hue, for evidence of the origin and nature of the disease.

Syphilis is well known to affect the tissues in a certain order; and there is often, but not always, much regularity in the time. Usually, there is first a primary sore, then a swollen absorbent gland, afterwards an eruption of maculæ, followed by an ulcer in the throat affecting the tonsils or velum, or, in other cases, the tongue or lips. The periosteum then becomes inflamed, and a node appears; subsequently the iris is affected; then a secondary eruption on the skin appears, frequently scaly or tubercular, particularly in the palms and soles in the form of lepra, and affecting the genitals and nates in the form of condylomata. At length the cartilages and bones of the nose, face, skull, or other parts, become carious.

When a patient has contracted syphilis originally, and appears before us with a suspicious eruption, we shall generally find upon inquiry, that some or all of the above-mentioned parts have been affected, usually in the order which has been described. When, however, the disease is hereditary, the links of the chain cannot be so clearly traced, and the diagnosis may be difficult. Here, if we can gain any satisfactory knowledge of the health of either parent, it may materially assist our judgment. The eruption should awaken suspicion if it be copper-coloured, and if there be a tendency to ulceration; particularly if the ulcers burrow under the skin, and are partially covered with dull copper-coloured bands of integument. It may likewise be observed, that syphilitic eruptions rarely itch intensely, and as seldom assume a form of active inflammation.

In investigating the nature of venereal eruptions, we may easily be led astray. Various in their form and hue, and not less so in their degrees of severity, they have been described by authors under different names. Hunter wrote of "diseases resembling syphilis": Abernethy wrote of "pseudo-syphilitic diseases": modern writers distinguish between syphilitic and "syphiloid" diseases: Carmichael describes four kinds of syphilitic disease, both primary and secondary; and some of the French surgeons take similar views.

There are, however, many reasons for the belief, that, in this country at least, there is but one syphilitic poison; and that the mischief which this poison may effect depends, in individual cases, not so much on the intrinsic virulence of the poison itself (for of this we can know nothing), as upon the susceptibility of the patient. Some persons cannot be inoculated with it at all; in others it produces only a primary sore; in many it establishes a formidable disease; and a few are absolutely destroyed by it.

The most perplexing difficulties met with in modern practice, connected with the diagnosis of venereal affections, appear to me to arise from a too hasty adoption of the theory, that *mercury is capable of originating diseases similar in character to the secondary forms of syphilis.* Against this dogma, which, so long as it prevails, must necessarily involve the subject in a labyrinth of difficulties, from which there is no escape, I must beg most earnestly to protest, for these reasons:

I. Symptoms resembling syphilis are never observed to result from the use of mercury in cases in which syphilis has neither been previously contracted, nor inherited. No practice is now more common than the exhibition of mercury for various forms of inflammation affecting many of the organs or tissues. Mercurial treatment has, in fact, to a great extent, taken the place of depletion, and is very frequently pushed to ptyalism; and yet, to whatever extent the gums, or the salivary glands, or the bowels, become affected, we never find eruptions or ulcerations resembling syphilis, produced by this treatment. The cheeks and the gums, the lips, the throat, and the tongue, may all become the seat of mercurial ulceration; but the ulcers do not resemble those of syphilis. They are more superficial, less persistent, usually healing when the mercurial irritation subsides; and they never resemble syphilis in affecting distant parts in a certain order. In these and other respects they bear no resemblance whatever to syphilitic affections; and when the system is really free from lues, the difference between these mercurial ulcerations and the sores of syphilis, must be as obvious to the most superficial observer, as is the distinction between the *eczema mercuriale* and the *lepra syphilitica.*

II. The morbid effects of mercury are peculiar, and well-defined; and, with the exception of the ulcerations above described, do not even approach in character any form of syphilis; neither do they exhibit the slightest similarity to that disease. They are as follows: sore gums, salivation, loosening of the teeth, diarrhœa with griping, dysentery (or green mucous evacuations in children), extreme depression of the nervous system, accompanied with trembling of the limbs, infirmity of purpose, an undefined dread of evil or danger, with pusillanimity of mind, dyspepsia, rheumatism,[1] *eczema mercuriale,* etc.

III. The occasional aggravation of syphilitic disorders, under the administration of mercury, may be rationally explained, and fully accounted for, without supposing it capable of originating a chain of symptoms, the character of which (if not the full development) had been established in the system long before the administration of a grain of mercury. The mode in which mercury, when used in excess,

[1] Rheumatism induced by mercury occasionally throws out nodosities in the neighbourhood of joints, but these are not easily confounded with the venereal node.

aggravates the syphilitic action, will be hereafter explained, without adopting the lame and impotent conclusion, that the remedy is capable of producing a disease similar to that which it cures,—a conclusion which has always appeared to me to resemble more the visionary subtleties of homœopathy, than the sober realities of medical science.

PROGNOSIS OF SYPHILITIC ERUPTIONS.

Syphilitic eruptions, like other forms of lues, generally discover, if left to themselves, a tendency to persist (with occasional intermission) through life; and they may be transmitted from either parent to the children.

In a few cases, a spontaneous recovery appears to take place; and, in many, the eruption will disappear for a time under alterative treatment. But it will now be attempted to show that the spontaneous recoveries from syphilis are apparent only, not real.

There is no disease, the destruction of which it is so important to ascertain with certainty, as syphilis. An error here may not only spread unhappiness and desolation over the prospects of married life; but it may affect the health of the next generation. It is therefore impossible to exaggerate the value of well-considered and well-founded opinions on a subject which has been too much regarded as one of mere theory and speculation. The popular belief on the subject is strong, and calls loudly for attention. So anxious, and so properly anxious, are young men to know if, having once suffered from syphilis, they may safely marry, that there are few cases of monomania more common than *imaginary* lues; and the imaginary disease is far more difficult to cure than the real. One reason of this may be found in the unsettled state of medical opinion and the uncertainty of the prevailing mode of treatment.

The *vis medicatrix naturæ* is observed to relieve the system of certain morbid influences or agents, in one of three ways: by elimination, by decomposition, or by tolerance. Under the two former processes, the disease may possibly be cured; but, under the latter, it is only tolerated, or latent. We have no proof that the act of elimination ever occurs spontaneously, or otherwise, in lues venerea; we do not even observe an abortive effort to expel the poison, as occurs in primary syphilis, gonorrhœa, cholera, diarrhœa, diabetes, etc. Neither is there any reason to believe that the poison is ever spontaneously decomposed or neutralized.

The spontaneous recovery from syphilis, when it does occur, appears to be nothing more than a recovery *by tolerance*, consisting merely in the temporary abeyance of the diseased action, excited by the presence of a poison to which the system has at length become habituated and reconciled for the time. This theory of tolerance is in perfect harmony with all the analogies of natural history, physiology, and pathology. The well-known fact that many mineral and vegetable poisons, such as antimony, mercury, tobacco, and opium, become comparatively harmless by long usage, losing their toxical powers as the system becomes habituated to their influence, would sanction the anticipation that certain *animal* poisons also would become inert from the influence of time and habit: and so in fact we find it. An infected couple, both originally labouring under gonorrhœa, may cohabit until all symptoms

of disease in both of them have vanished. Yet they are both capable of communicating the disease to a stranger. John Hunter relates several cases of this kind, showing that a woman, without any new infection, and without any symptoms of disease on her own person, may communicate gonorrhœa to one man, and not to another; and he was of opinion, that the capability of communicating the disease is sometimes the only criterion of a woman having it herself. The late Mr. Hey, of Leeds, was of opinion that a person may infect another with the lues venerea after all symptoms of the disease have disappeared. And if a doubt may be entertained of the nature of the disease on which these opinions are founded, there is abundant proof in the history of syphilis, of its capability of existing in a latent form, as in the well-known circumstances attending the disease at Lisbon during the Peninsular war. At the time when our troops were stationed in that city, the disease existed among the inhabitants in so mild a form, that no mercury was necessary for its cure; and the dancing girls, from whom our soldiers were infected, were well enough to pursue their avocations on the stage without inconvenience. Yet the disease which they communicated to our officers and men proved to be so terrible a form of syphilis, that it was called the "black lion". It produced phagedenic or gangrenous ulceration of the genitals, and horrible mutilations. It was the opinion of some of the army surgeons, that this was a new disease, or at least a form of syphilis of unusual malignity. It is, however, much more rational to look upon it simply as syphilis, so well tolerated by the inhabitants as to become almost latent, but malign in its effects upon the soldiers from the exhausting influences of fatigue, excesses, and a new and sultry climate. This is quite conformable with the fact, that syphilis generally proves a severe disease upon its first breaking out in a country. In England it is certainly much less formidable than it once was. Less mercury will cure it, and it occasionally wears itself out; but it is syphilis still, and its milder forms are often as treacherous as they are transient. A latent virulence lurks under the mask, which may burst out destructively when least expected. For this power of tolerance has its limits. It is limited to certain persons, to habits of life, to conditions of health, to climate, and sometimes to a generation. Thus, sometimes, syphilis may be almost latent in the parent, but severe in the child. A mother may have no symptoms of syphilis in her own person, but may have a succession of still-born children all poisoned *in utero*, or born alive, covered with maculæ, and falling early victims to the disease. A father, in whom lues has become tolerated and latent, may beget a diseased child, who shall, if weak or scrofulous, suffer more than the father. Spontaneous recovery from syphilis is, therefore, in many cases, perhaps in all, an appearance, not a reality.

TREATMENT OF SYPHILITIC ERUPTIONS.

Alterative Treatment. The alterative cure of secondary syphilis, sanctioned as it is by the practice at some of the London hospitals, is probably of the same nature as the spontaneous recovery. Though the anti-syphilitic virtues of Plummer's pill, sarsaparilla, guaiacum, iodine, arsenic, and the mineral acids, are very questionable, these medicines evidently have the power of rendering certain subjects

tolerant for a time at least, of certain forms of secondary syphilis. These agents will bring about the healing of ulcers, the dissipation of eruptions, and the reduction of periosteal swellings; and under this treatment, combined with a regulated diet, scores of patients, perhaps hundreds, are annually dismissed from our hospitals, apparently free from every vestige of disease. The Plummer's pill, although it contains calomel, does not appear to act mercurially, the sulphuret of antimony modifying its action. Indeed, the specific effects of mercury are not apparent; this treatment, therefore, is non-mercurial, and yet patients appear to recover under it. But do they really recover? Do they not frequently return again and again to the same hospital, or to some other hospital, and when again discharged, apparently cured, does it not frequently happen that the first exposure to the effects of intemperance, want, or cold, induces a relapse of the disease? Or, if it be tolerated for life, so that it does not re-appear in the person of the patient, is the wife safe; or, more especially, are the children of the patient safe? The question admits of great doubt. A large proportion of the cutaneous diseases met with in every station in life, are syphilitic. That a man can, without infecting his wife, transmit to his children a syphilitic taint, is an established doctrine. Several cases of this nature are related by the older writers on surgery, and by some of modern date. Several, also, the validity of which no scrutiny can impeach, have occurred in my practice. I have seen syphilis in infants and in children of all ages, whose fathers had married after the non-mercurial treatment of the disease had effected an apparent cure. After marriage (in some cases several years after), secondary eruptions made their appearance. These were treated mercurially, and the result was most instructive. The wife escaped, as did also the children begotten *after* the mercurial treatment of the father; but the children begotten *before* the mercurial treatment were infected. In one instance, the child suffered more than the father. The father had psoriasis plantaris in a mild form; the child, a girl of ten years of age, had iritis, sores about the nostrils, and a scaly eruption on the scalp. All these diseases, together with that of the father, yielded to active mercurial treatment, and to no other; iodine, sarsaparilla, and other remedies of that class, having proved perfectly inert. Several children, begotten and born after the mercurial treatment of the father, were perfectly healthy, nor was any trace of disease to be found in the mother. In another striking instance, a married man contracted syphilis. The primary sore readily healed under simple treatment. Secondary symptoms appeared, which ultimately yielded to active mercurial treatment. In the interval between the healing of the primary sore, and the subsequent mercurial treatment, a female child was begotten. This child was born apparently healthy, but, as she grew up towards womanhood, suffered from sore throat, scaly eruptions, sores about the nose, and other unequivocal symptoms of syphilis. Subsequently to the mercurial treatment of the father, several children were begotten, but not one of these has been affected. And two elder children, born before the father contracted syphilis, have been also entirely free from the disease, together with the mother, who was fortunate enough to escape infection in the first instance.

Nothing is more common than for middle-aged men and women who are afflicted with secondary syphilis, to deny that they were ever affected with a primary sore; sometimes admitting that they have deserved to contract the disease, but denying that such has actually occurred. Assuming that some of them report falsely, common sense claims a certain proportion of these cases as cases of hereditary syphilis, breaking out for the first time in middle age in the form of secondary symptoms.

In the instances which have fallen under my notice, I have generally found alterative treatment useless, and mercury all-sufficient; and the conviction has been more and more forced upon my mind, that the non-mercurial treatment of secondary syphilis may be generally regarded as an inefficient and ineligible practice; inefficient as regards the patient, and ineligible as tending to infect large masses of the community with hereditary syphilis. The disease may be, and often is, mild in its hereditary forms, and it may possibly wear itself out in a generation or two; but this by no means always happens. It aggravates the strumous habit when it happens to come in fellowship with it; and probably is at the foundation of many cutaneous and cachectic disorders, the character of which is undefined and unsuspected. One cannot, therefore, but deprecate a practice which allows the blood to remain vitiated and tainted, from generation to generation, with the presence of an animal poison, which we have, in most cases, the power of destroying at once and for ever.

Mercurial Treatment. The prevailing objections to the use of mercury in syphilitic diseases may be thus summed up: 1, That it occasionally produces lesions more formidable than the disease for which it is prescribed; 2, That its use is not generally necessary to their cure; 3, That besides being unnecessary and injurious, it often proves inefficient and inert.

That there is much of real truth in these objections, no practical man can deny; but there is likewise much fallacy. For as these diseases, in their secondary forms at least, rarely get soundly and permanently well without mercury, it may be said to be generally necessary to their cure. And if rightly and vigilantly administered, it is generally successful. But both its safety and its success will be found to depend very much on its *mode of administration*, by which term is intended to signify something more than its *mode of introduction* into the system; for this, except in peculiar cases, appears to be of little consequence.

Our success in administering mercury may be very much limited by erroneous views of its mode of action. The mineral and the disease have been regarded as two antagonising poisons; the poisonous influence of the mineral counteracting that of the disorder, by setting up in the system a morbid action of a different kind, and incompatible with it. On this theory it would appear that the more disastrous the effects of the medicine, short of the actual destruction of life, the more perfect would be the safety of the patient. The more he is poisoned by the mineral, the less would he be poisoned with lues. And in the event of the disease becoming aggravated by the severity of the mercurial course, it would be necessary for the truth of the theory, to hold, that the original disease having been vanquished by so much

mercury, the existing symptoms must be the symptoms of a *mercurial disease*.

The true theory is probably the very reverse of this. It is very doubtful whether any real advantage is derived, in any case, from the morbid effects of drugs. Disease may succumb in spite of such influence, but not in consequence of it. If a poisonous drug is allowed to do mischief, it has probably been given in excess. A smaller quantity would have accomplished our therapeutical purposes, not only as well, but probably more efficiently. It is in the right dose of a medicine that its real value consists; and too much study cannot be given to this all-important point. As a general rule, the doses in which we are accustomed to exhibit poisonous remedies, are perhaps not only large, but injuriously excessive.

Mercury belongs to the class of mineral tonics, which, in excessive doses, become irritants, and, in large doses, poisons. Its tonic action ceases when irritation is excited in the tissues. In order to avail ourselves of the full benefit of tonics, our attention must constantly be directed to their special properties and peculiarities of action. There is in the organic system an inherent tendency to health. Disease is an accident; a breach in the economy, which nature is ever intent on repairing. But in this she sometimes fails; and the design of tonics is to supply what is wanting. There is sometimes a deficiency of pure healthy blood; and the preparations of iron restore that fluid to a healthy condition. In other cases, the blood contains an amount of poison; and some tonic must be selected which is capable either of eliminating or decomposing the poison. Mercury probably acts by producing some chemical change in the blood, which renders the poison inert for a time, and, under careful management, for life. But as the salts of iron are liable to create disturbance in the functions, if given in excessive doses, under which circumstances their tonic effects cease, so mercury must be so administered as not to depress the powers of the system, which are required for the destruction of existing disease. So long as the general system does not suffer from the mercurial poison, it will remain capable of taking advantage of the special effects of the mineral as exerted on the morbid condition of the blood. But when the gums become sore, or the bowels disturbed, there is here a new source of irritation and debility. The animal poison may have been in part neutralised; but, if the strength of the system be sacrificed to the action of the mineral poison, it will no longer be able to contend with the original disease, which, although less virulent in its nature, may become more destructive in its effects. It often happens, that syphilitic symptoms will yield under a course of mercury up to a certain point; the disease will then become stationary, and, if the medicine is persevered in, the symptoms will become aggravated. Sores which were healing will again ulcerate, dissipated eruptions will re-appear, and the patient may even fall into a worse condition than before. And yet the disease is as purely syphilitic as ever it was, and as ready to yield to mercury, if rightly administered; but the system being for a time deranged by its excessive administration, the *vis medicatrix naturæ* is paralysed, and the disease is triumphant.

But, apart from theory, the case is practically this. Mercury gene-

rally excites a salutary influence over syphilitic eruptions; but only for a time. It then does harm. Whatever be the reason of this, the practical conclusion is plain. We must then desist; and, if necessary, renew the treatment when the system has recovered from the shock. It is much safer to administer an active remedy, under the guidance of the observable phenomena of its action, which present themselves to our notice, than in obedience to any theory deduced from extraneous sources. That the latter method has been prevalent, both in the excessive, and in the too sparing, use of mercury, is but too apparent.

Every mineral used in medicine has some peculiarity of action, which can only be understood by long and attentive observation; and without a familiarity with these habitudes, we use the medicine at great disadvantage. Too much attention cannot be given to this subject. In order to show its important bearing, the action of mercury may be contrasted with that of arsenic. Thus:

Arsenic	Mercury
Produces its maximum of good by slow degrees, and by continued and prolonged exhibition.	Effects its salutary purposes often suddenly; always within a limited period; or, beyond that period, fails altogether.
Has a cumulative action, the system becoming more and more sensitive to its presence, and intolerant of its influence, in proportion to the quantity swallowed.	Has no cumulative effects after the first few days; and the system becomes less and less sensible of its presence, and more tolerant of its influence, by its habitual use.
May be given until the patient will not bear the five hundredth part of a grain.	May be given until enormous quantities prove absolutely inert.
Affects the nervous system more readily at first, and afterwards the vascular system, the nervous tissues recovering their tone.	Affects the vascular system more readily at first, the nervous system suffering severely after a lengthened course.
Should therefore be added to the blood drop by drop, *cautè et gradatim*, in diminishing doses.	Should be poured in suddenly, until it produces some effect, then as suddenly withheld for a time, and resumed, if necessary, with greater energy.

That the vascular system may be gradually inured to the influence of mercury, so that doses which at first had the power of salivating, may at length be administered without producing any sensible effect; and that, in order to excite as ready an action by a second or third course of mercury, as by the first, the dose must be increased, if not doubled, must be well known to every practitioner. It is also matter of common observation, that the salutary action of mercury on diseased structure, is nearly contemporaneous with the morbid action of the mineral on the gums or other tissues. Accordingly, the common practice has been, not only to make the gums sore, but to keep them sore for days or weeks together, with a view to the continued and protracted effects of the remedy on the disease. As it was once believed that copious ptyalism was necessary to insure the full benefit of the mercurial treatment, so of late it has been generally held, that a continued, though moderate, degree of soreness of the gums is a necessary condition. This opinion appears, however, to rest upon no better foundation than the former now long exploded notion.

Both the one practice and the other appear to be founded on the belief, that the morbid action of the mineral on the healthy tissues, takes precedence of its salutary action on the diseased structure.

Many years' close and anxious observation have established in my mind the opinion, that this is an erroneous view. It is not easy to detect, in an ulcer or an eruption, the first appearances of healthy action; and it is clear that healthy action must exist for some little time before it becomes apparent. If, therefore, the gums first become tender, and the ulcer first presents an improved appearance, on one and the same day, it is fair to presume that the healthy action had been actually set up on the previous day, that is, antecedently to the morbid action on the gums. But further, close observation will generally reveal the fact, that the very appearance of improvement in the diseased parts exists before the gums are in any degree affected. The mercury has effected the good before it has effected the evil. The soreness of the gums, therefore, is a sign, not merely that the mercury has been pushed far enough, but that it has been pushed *farther than was necessary* for the establishment of healthy action in the diseased parts. If a drachm of strong mercurial ointment has been used every night for five successive nights, and if, on the following day, healthy action is substituted for diseased; and if, on the sixth night, the inunction is continued, the gums becoming slightly sore on the following day,—in such a case as this, the mercury has been continued two nights longer than necessary: for the healthy action, which became apparent after the fifth night, must have existed the day before, though unobserved; consequently disease had been actually arrested by the fourth inunction; and the healthy action thus set up, would doubtless have continued, for a time at least, if the mercury had been omitted on the fifth and following nights. The injury inflicted on the gums, therefore, was wholly unnecessary to the immediate restoration of health. The effect has been sudden, and probably instantaneous,—but will it be lasting? Probably not; and the practical question is: Would the effect have been rendered, in any degree, more permanent or satisfactory, by persevering in the mercury? It is now pretty well agreed, that no advantage would have resulted from salivation; for sores which had become healthy at the commencement of a mercurial course, have been but too frequently observed to retrograde under a protracted ptyalism. And the same thing has been observed under a mild but long-continued course, affecting the gums but slightly.

Under the mercurial irritation in any and every degree (whether from the consequent exhaustion of the *vis vitæ*, or from whatsoever cause), the latent virus, if any exists in the system, is liable to break out in an aggravated and destructive form. It is, therefore, not only useless, but in some degree dangerous, to persist in the use of mercury for a single day beyond the date of a visible improvement in the disease. It is, however, often necessary to have recourse to a second course, or even a third or a fourth, in order to effect the final destruction of the disease. Each succeeding course must be more energetic than its predecessor; otherwise little or no effect will be produced. The courses should also be short and distinct, and should be so managed as to arrest disease without disturbing the general health. The case should be watched *day by day*, and an improvement in the disease, ever so slight, be it real and satisfactory, should be regarded as the signal for arresting the course. Then aperients and tonics should be substituted for the mercury; and the very first appearance

of a return of the disease indicates the necessity of a renewed administration of mercury in doses twice as large as the first. By this means disease may often be arrested in an incredibly short time; and when the system is again purged from the mercury, a third course may be administered as a preventive, suspending the mineral as soon as fetor is observable in the breath, or a bitter metallic taste complained of by the patient.

The whole of this practice, which has proved very generally successful, is founded upon the fact, that the action of mercury on the disease is sudden, and of short duration. It is that of a shock; and the impulse appears to be expended upon the organic nerves. In what way such an action on these nerves can permanently destroy a blood disease, it may not be easy to explain:[1] but that the final results are not compromised by the limited duration of the mercurial action is quite certain. Indeed, the radical cure of the disease never proves so difficult as where mercury has been administered in large doses for many consecutive months. The debility thus produced too often renders the system a helpless victim to the disease. Whereas, by short and vigorous courses, the vital powers are roused and invigorated, the appetite is increased, the digestive organs become active, sleep is procured, and the disease appears to yield rather to the *vis medicatrix naturæ* than to any specific anti-syphilitic virtues inherent in the mineral.

These views may appear opposed to the experience of many practical men, who, failing to effect a radical cure of syphilis by a short course of mercury, have seen the disease annihilated at length by a persevering use of the remedy for many weeks together, to the severe injury of the gums. Such cases occurred in large numbers in the early part of my practice; and it was once my opinion, that the benefit was due to the unremitting use of mercury. More recent experience, however, has made it evident, that the disease would have yielded quite as fully to a shorter course, and that the benefit derived from the continuous use of mercury, was all due to the shock produced at the commencement of the course.

A very powerful, yet incidental, illustration of the principles above enumerated, has been furnished by a recent publication from the pen of Mr. Langston Parker. This gentleman has found that by a process of fumigation, the beneficial effects of mercury may be secured with more certainty and less inconvenience than by the usual methods. The advantage is evidently derived from the rapidity of absorption and consequent suddenness of effect. Mr. Parker's practice must, of course, be limited by its attendant inconveniences; but the principle is capable of almost universal appliance. We have had long experience of its value in the use of mercurial inhalation. The fumes of the oxides of mercury received into the fauces have been found to produce the specific effects of the medicine when the system has been proof against inunction. But it is easy to apply the principle to any

[1] The rapidity with which diseased action is exchanged for healthy, under the influence of mercury, reminds one of the chemical changes produced by galvanism. We know little as yet of animal chemistry; but if we look at the action of mercury as electro-magnetic we shall be able to account for many otherwise obscure phenomena.

mode of introducing mercury into the system, which it may be found convenient to adopt.

It will be most needful, however, to be aware of the possibility of severely salivating the patient by an unguarded exhibition of a very few energetic doses. This danger will occur to the mind of every prudent practitioner, and will deter many from adopting the method of treatment above described. But the danger need only be foreseen to be avoided. We must make it our special business, before commencing the therapeutic course of mercury, to administer an experimental course, just to ascertain exactly the degree of mercurial susceptibility inherent in the constitution of the patient. This may be done in the most guarded way; and, if the patient is unusually susceptible, this first trial may prove therapeutical. If not, it will serve to indicate the dose which the patient will bear with impunity.

Neither must it be forgotten, that we now and then meet with a subject wholly and incorrigibly intolerant of mercury; and, even if we can coax the vascular system to bear it, we irritate the nervous tissues beyond endurance. These cases are rare exceptions to a very general rule. Strumous subjects also are apt to bear mercury ill; but by combining the mineral with the preparations of iron, and giving the patient the advantage of the coast, the open air, and a mild season, the difficulty is often overcome, especial caution being requisite lest the gums or glands should suffer irritation. When pulmonary tubercles are discoverable, even in a latent form, mercury is to be avoided. Nothing is so likely to promote their development and maturation as a mercurial course. When syphilis and phthisis co-exist, the case is hopeless.

Much importance is attached by some practitioners to the selection of the medicinal preparations of mercury; some giving the preference to one form or mode of introduction, others to another. Without depreciating the real value of these preferences, it may be questioned whether any general rule can be laid down. Every preparation has its objections as well as its advantages; but both the one and the other are casual, not inherent. The chloride is active and energetic, and invaluable in cases of iritis, where there is no time to be lost; but it is apt to create undue irritation in the bowels. Inunction is a safe and, generally, a sure mode of introduction. But it is a dirty and inconvenient practice; and now and then we meet with cases in which the absorbents of the skin refuse to perform their office: neither can we in any case ascertain how much mercury is actually absorbed. The blue pill is a mild and convenient form for the first course; yet it is liable to remain unchanged and inert in the bowels, or, on the other hand, to be converted into the chloride or bichloride. The latter preparation is often active and useful, but it fails in safe doses to create the salutary shock so necessary to the full effect of mercury on the system. Fumigation, either general or local, presents perhaps more advantages, when it can be conveniently had recourse to, than any other mode,—but it is a difficult and delicate question, how to regulate the dose. It is my usual practice to begin the course with two or three grains of blue pill every night for three nights, by way of experiment. If this produces no effect, an aperient is administered, and after it, five or seven grains of blue pill night and morning, until its salutary

effect becomes visible. In the second course, the dose is increased; in the third, inunction is preferred; in the fourth, inunction, together with frequent doses of calomel, with or without opium. In strumous cases, the bichloride, combined with the compound tincture of cinchona for adults, and the grey powder for children, with some preparation of iron, have been found most useful.

In all cases, regard must be had, not only to the original constitution of the patient, but to his present condition. Both plethora and anæmia are conditions highly unfavourable to the advantageous exhibition of mercury. In the former case, depletion must precede the mercurial course: in the latter, the preparations of iron may be combined with mercury, or otherwise administered.

26, Bedford Square, January 1851.

ON INTERNAL STRANGULATION OF THE INTESTINES.

By HENRY HANCOCK, Esq., Fellow of the Royal College of Surgeons of England: Surgeon to Charing Cross Hospital.

(*Read before the Medical Society of London, January* 4, 1851.)

Cases of Internal Strangulation of the Intestines are so obscure, so difficult of diagnosis, and so fatal; their *post-mortem* examination so frequently develops the probability of relief from early operation, whilst our knowledge upon the subject is so very defective, that great benefit would ensue if all cases occurring in the practice of individuals were recorded, and therefore I am induced to submit the following cases to the attention of the Society; for although they terminated fatally, they may, as collateral evidence, strengthen the hands of the surgeon, and justify him in proceeding to operation earlier than has hitherto obtained.

Case I. I was, on Sunday the 3rd of November last, requested by my friends, Messrs. Brown of Lewisham, to see the gardener of a gentleman residing at that place. I am indebted to them for the following particulars.

E. P., married, æt. 51, an under-gardener, who had resided in his situation for twenty-three years, about five feet six inches in height, of stout proportions, of active and temperate habits and healthy, except having had inguinal hernia on the right side, for which he had constantly worn a truss for ten years; was on the 17th October, 1850, assisting in raising a tree which had been blown down, and using great exertion, suddenly felt a sharp pain across his abdomen, which almost caused him to faint. He went home, and took some hot brandy and water; the pain subsided in about two hours, and he resumed his usual employment, and thought nothing more of the pain or the circumstance of straining himself. On Wednesday, October 30, thirteen days after the strain, he complained of a slight pain in the stomach, which he attributed to his bowels not having been sufficiently opened for two days, for although on the day previously he had had several evacuations after taking some pills, he felt unrelieved, and complained of pain across the umbilicus. He was ordered eight grains of Dover's powder, with three

grains of calomel, and a strong purgative mixture. On the 31st, the pain in his abdomen was gone, but his bowels had not been acted upon. Calomel grs. iij, scammon. gr. x; to continue the purgative mixture.

Nov. 1. Being considered better, was not seen, but at night sent for more medicine, as his bowels had not been opened. Cal. gr. v, scammon. gr. x, in castor oil, mist. sennæ c. ʒij, 4tis hor.

Nov. 2. Has passed a very bad night and vomited many times. He for the first time mentioned the pain he suffered when replacing the tree, but thought that had nothing to do with his present illness. His abdomen distended, and in great general pain. No tenderness or increase of pain on pressure; no hernia on the right or left side to be seen, felt, or detected; distressing pain about the umbilicus; vomiting almost constant, apparently pure bile; countenance dejected; skin yellow; pulse 126; tongue clean and red; in a profuse perspiration; respiration 21. Introduced a long tube into the rectum and injected about a pint and a half of gruel, with castor oil and salt; it came away immediately with considerable force, and accompanied with a few bits of hardened fæces; two more injections were given at intervals with the same results; to take cal. gr. v, pulv. opii gr. ¼, every two hours, castor oil, with two drops of croton oil, and the compound senna mixture; the bowels to be kept constantly fomented with the poppy fomentation and flannel, and the abdomen to be carefully rubbed. 1 P.M. Remedies continued; vomiting urgent; countenance very distressed; eye sunken; complains of great pain all over the abdomen, but could not make him point out any particular spot; sickness very distressing; skin jaundiced; pulse 130; tongue clean; urine of good colour, passes freely. 5 P.M. Symptoms aggravated; tongue dry; administered another enema, with the same result; ordered brandy and soda-water. 10 P.M. Continues in the same fearful state; has passed a few pieces of hardened fæces, but no wind; the distension of the abdomen has increased, but not the pain.

Nov. 3, 9 A.M. Has passed a most wretched night, until early this morning, when the vomiting ceased for six hours, during which interval he had some sleep; the vomiting, however, returned occasionally. His abdomen much distended, but not in pain; countenance collapsed; thirst great; pulse 136; very feeble; tongue clean; extremities cold; appears sinking fast. 1½ P.M. Continues to get worse. He was seen and examined by Mr. Hancock.

I found the patient in the condition which has been so ably described by Mr. Brown, and after a careful examination could not detect any signs of hernia, either on the right or left side. The patient told me he had worn a truss on the right side for the last ten or fifteen years; but said he was sure the hernia had nothing to do with his present sufferings, as it had not been down, and he experienced no pain in that situation, either during my examination or at other times, whilst he complained greatly of the pain above the umbilicus; indeed he appears to have suffered so little inconvenience from the rupture, that his wife, to whom he had been married twelve months, was not aware of its existence, as she told me that, although she saw the truss, she did not know why he wore it, and that he never complained of anything being the matter with him.

It was evident that the poor fellow was dying, whilst the symptoms and previous history led us to the conclusion that an internal strangulation existed, of some kind or other; but what its precise nature was, whether intussusception, band, or otherwise, or its exact situation, we could not decide with any degree of certainty. However, it was agreed, as presenting the only chance of saving him, that an exploring operation should be performed, and his consent having been freely given, it was proceeded with, with as little delay as possible; but before selecting the spot for operation, a very careful examination of the whole abdomen was made. Not the least external appearance of hernia was to be discovered; the whole abdomen was distended, but not very painful to the touch in any part; but about three inches above Poupart's ligament, on the right side, Mr. Brown directed my attention to a spot at which an elastic and firm feeling was communicated to the finger, and on consultation it was decided to operate at that point. I therefore carried an incision, beginning rather more than an inch above the anterior superior spinous process of the ilium, continuing it towards the linea alba. The abdominal layers were carefully divided in the same direction; and upon coming down to the fascia transversalis, it appeared to bulge at the spot mentioned, and when this was divided, a bulging of the peritoneum the size of a walnut was discovered; this was laid open, and a knuckle of congested intestine disclosed. I sought the seat of stricture, but it was so high up I could not reach it until I drew the intestine gently down for about two inches, when Mr. Brown detained it in that situation, and I was enabled to divide the stricture, which was so firm that we could all distinctly hear its division by the knife. The wound was then brought together, and same brandy and water and opium given to the patient, who, however, died very shortly after the operation.

I was not present at the post-mortem examination, which took place twenty-four hours after death; but I am indebted to Mr. Brown for the following particulars. The intestines contained a considerable quantity of fluid, and were so distended that it was thought necessary to puncture them, and more than three quarts of fluid poured out. The intestines were neither inflamed nor congested, excepting for about four inches, which had been constricted, and which was congested. The constricting band had been completely divided, and no other adhesion or band could be discovered in the course of the intestines, which were perfectly free.

Case II. The next case was that of a gardener to a gentleman residing at Hampstead, to whom I was called by Mr. Willin. He had been wheeling some heavy barrows of turf, and whilst warm drank a pint of ale rather quickly, immediately upon which he was seized with severe cramping pains in the abdomen. He subsequently presented the same symptoms as in the last case. Obstinate constipation, continued vomiting, swelling of the abdomen, and pain referred principally to the umbilicus. The abdomen, though swollen, was not very hard, neither was the pain much increased upon pressure, excepting in one spot over the right iliac fossa. When I saw him, the symptoms were for the time alleviated by calomel and opium; his pulse were better; abdomen softer, and free from pain; countenance

less anxious; and the patient expressed his opinion that he would get well: it was agreed, therefore, to continue the same treatment, unless he became worse, when an operation was to be proposed to him. In accordance with this, on the following day, his symptoms being much aggravated, Mr. Willing suggested an operation, and sent for me to see the patient again; but, in the meantime, he found that the man resolutely refused to submit, whilst the friends locked the garden-gate, and declared they would not admit either of his doctors within the premises. Under these circumstances, nothing could be done; the man lived three days, and then died exhausted. We obtained permission to examine the body, and found the cause of mischief to exist in the right iliac fossa. The appendix vermiformis was turned up, and through the ring thus formed a portion of the ilium had protruded; and I was enabled to withdraw it without the slightest difficulty, as, although the constriction had been sufficient to prevent the passage of the contents of the intestine, it had not been sufficient to produce strangulation, or even inflammation, of which there was no trace.

The anxiety connected with cases of this description is greatly enhanced by the uncertainty attending the exact seat of obstruction, from whatever cause it may ensue; the symptoms are frequently so deceitful, the history so meagre, and unsatisfactory, that we have but little to guide us in the selection of locality. It has been stated that a pretty correct opinion may be formed as to the point of mischief, by the constant pain referred to that spot; but this theory is opposed by the first case related, as here the pain was confined to the umbilicus and pit of the stomach, whilst the patient denied its existence over or near to the actual seat of constriction, over which he could bear considerable pressure without suffering; and, indeed, it was only the particular feeling referred to the touch, upon pretty full pressure, that led us to perform the operation where we did. It might fairly be asked, did not the previous existence of hernia give you some clue to the nature of the mischief, and would not that serve as a guide? It might in some instances; but attention was paid particularly to this point. Not the slightest external swelling or projection at the rings could be detected; whilst the man denied that it had been down, and actually scouted the idea of his sufferings being in any way connected with it: and what still more strongly marks the slight dependence to be placed upon the pre-existence of hernia as a guide is, that I was once present at an operation for the relief of internal strangulation; the patient, a woman, had suffered from femoral rupture of the right side for some years, and it was thought that the then existing symptoms might in some measure be connected with it. However, the evidence was so unsatisfactory, that the surgeon determined upon opening the abdomen at the linea alba; it was then discovered that the hernia had nothing at all to do with the matter, but that the obstruction existed on the other side of the abdomen.

Again, the symptoms are so undecided as often to mislead, or, at all events, to increase doubts as to the nature of the mischief. It is an interesting and important fact, that in these cases the constriction shall be sufficient so to interfere with the functions of the part, as sooner or later to destroy life, without at the same time producing any appreciable degree of inflammation; this was the case in both the

examples here related, and this accounts for the fact that, although in both instances the abdomen was distended, it was not hard; it could bear pressure; and in both the patients could lie with their legs straight down in bed. Again, the first case proves that we have not always the entire and complete arrest of the passage of the fæces to guide us in our diagnosis, as we find the bowels acted more or less for thirteen days from the occurrence of the strain; and I may here observe, that the passage of fæces must not always be looked upon as an unerring sign of complete freedom from constriction, even in strangulated hernia. A woman was brought into Charing Cross Hospital, having had strangulated femoral hernia of the right side, which had been returned after long-continued pressure by a very intelligent practitioner in the neighbourhood; the constitutional symptoms, however, were unrelieved. I saw her the next morning, and determined that should she not be better in the evening, I would perform an exploring operation, as, upon careful examination, the hernia appeared to have been completely returned; upon visiting her at eight o'clock in the evening, for that purpose, I found her improved, and was told that her bowels had been twice moved, and therefore I concluded all would go on satisfactorily; her bowels were again slightly moved on the following day, but, as she complained of some little uneasiness, a dose of castor oil was ordered. She became rapidly worse, and died from general symptoms of peritonitis in the course of a few hours. The post mortem shewed that the hernia, which was very small, had been returned "en masse", but that the sac did not contain the whole calibre of the intestine, but only a portion of its side.

Remarks. Notwithstanding the fatal termination of these cases, I have ventured to bring them before the notice of the Society, in the hope that they may be of service in directing attention to the propriety of interfering surgically at a more early period than what usually obtains, and of abstaining from the indiscriminate employment of purgative medicines, which had better be discontinued when sickness sets in, as they materially increase the patient's sufferings, diminish his strength, and lessen the probability of the operation proving successful. And I would again venture to advert to the fact, that patients in these internal constrictions are frequently destroyed by irritation and impeded function, and not by inflammation; that consequently the symptoms are more negative than positive: positive, for the most part, as regards sickness, constipation, and prostration; but negative as regards the swelling, and character of swelling, of the abdomen; the pain; and condition of the pulse, until at an advanced period. And, indeed, from the various cases which I have seen, but which the limits of this paper will not permit me to enter fully upon, I am inclined to believe that, in cases of constriction within the abdomen, the symptoms are seldom so acute and decided as either in strangulated hernia, enteritis peritonitis, or tuphlo-enteritis.

In conclusion, I would remark that I have here merely intended to submit the account of two cases, with a few remarks; but that I by no means offer this paper to the Society as an essay upon the subject of Internal Strangulation.

59, Harley-street, 31st Jan. 1851.

BIBLIOGRAPHICAL RECORD.

Works enumerated at p. 44.

Introductory Address on Medical Education, with especial reference to the Course of Study required for the Degree of M.D. in the Queen's University, Ireland. By Alexander Fleming, M.D. pp. 32. Dublin : 1850.

In treating the subject of Medical Ethics on a former occasion, we stated our conviction, that all useful reform in our profession must result from the united efforts of its members. We also expressed an opinion, that a great proportion of the evils which afflict us are directly traceable to the want of preliminary education ; which deficiency we regard as the fertile source of those multiform shapes of quackery which produce disunion among ourselves, and make us objects of contempt to the public. We stated, at large, our views as to the amount of general information which ought to be possessed by those who propose to enter upon the study of medicine ; and we intend, on the present occasion, to enter more particularly into the duties which belong to the student, *after he has acquired a due amount of general knowledge*, and when he is fairly launched upon his professional career. We are in hopes that our observations may be not altogether ineffective in awakening the attention of the profession to the improvement of the education of their juniors ; on these latter must the hopes of the profession rest, and by their success, or failure in acquiring sound principles of thought and action, must the future welfare of our common calling be determined.

However much we may have advocated the necessity of classical studies, and other branches of general knowledge in the education of youth destined for the medical profession, we by no means recommend that the student should combine Latin, Greek, and Mathematics. with his purely medical and anatomical studies ; nor do we for one moment defend the present miserable system of a young man wasting his time in superficially learning the Latin grammar at a period when he should be attending to his studies in the hospital or the dissecting-room. We strongly maintain that the former should be mastered *before* the pupil enters upon his strictly medical pursuits. If a boy, who has been under competent tuition from the age of ten to sixteen, has not been able to acquire a competent knowledge of Latin, and of the rules of arithmetic, together with the outlines of history, geography, and logic, he is certainly unfitted for a profession requiring so much mental energy, and such varied acquirements, as the medical ; and if it be ascertained that, from unavoidable circumstances, his education has been neglected up to the period we have mentioned, it would surely be advisable for his friends to put him under tuition for at least another year, before making him enter upon the actual studies of his intended profession. The year, devoted in this manner to preliminary studies, would promote, rather than retard, his real advancement, and might afterwards save considerable trouble, vexation, and expense.

The plans adopted by those who are intended for the medical profession are threefold :—1st. The student is sent to one of the universities, either that of London, Oxford, or Cambridge ; in all these some form of preliminary education is enforced by means of examinations. At Oxford the student must take the degree of Bachelor of Arts ; at Cambridge he must pass the Previous Examination ; at London he must pass the Matriculation, which, as we have stated in other articles, is a comprehensive and efficient test of general literary and scientific acquirements. In all these universities, these examinations must be passed *before* the student commences his medical studies ; but the University of London differs from the other universities in

not requiring residence for its degrees, and also in allowing the examinations to be passed at an earlier age than is permitted at the other seats of learning. This plan is adopted by those who aspire to the highest ranks of the profession.

2nd. The student is placed for two or three years with a practitioner, to learn the rudiments of his profession, before beginning to attend lectures and hospital practice. This system is called apprenticeship, from the French word *apprendre*, to learn; and, in the indenture, the master enters into a covenant to instruct his pupil, *or to cause him to be instructed.* We need hardly inform our readers that, although by the Act of Parliament it is required that the apprentice should remain with his instructor *five years*, it is practically necessary that he should serve only two; and, indeed, he need not actually serve him at all; for if his master is unable, or unwilling to instruct him, and allows him to obtain his information from other sources, both the letter and the spirit of the Act are maintained. This second plan is very generally adopted by those who are to become general or family practitioners.

3rd. The pupil is sent, at the age of eighteen or nineteen, with little or no preliminary education at all, to one of the great cities of London, Edinburgh, or Glasgow; he is placed under no control, is subjected to no previous examination, and is left pretty much to follow his own inclinations as to the method of pursuing his studies. This system qualifies a pupil to present himself as a candidate for the diploma of the Royal College of Surgeons of England, or for the degree of Doctor of Medicine at one of the Scotch universities. We are very far from asserting that all those who belong to any of those learned bodies are destitute of a knowledge of general literature and science, but it is a notorious fact, that no *evidence* of preliminary knowledge is *required* at any of these institutions. We should also qualify our statement by admitting, that the English College of Surgeons requires an extensive array of general knowledge from its *Fellows;* but as these form, and are likely for a long time to form, only a very small fraction of the profession, our remarks are not practically invalidated.

Of these different methods of professional education, the first is incomparably the best; though it must be granted, that the two latter have been followed, in early life, by some of our most eminent practical physicians. The evidence of preliminary knowledge, which the student is required to give, insures a certain amount of previous mental training, and proves his capability of grasping the difficult subjects which will afterwards be presented to his attention; while the progress of his subsequent studies is ascertained, at different intervals, by oral and written examinations. Those who pass successfully through these ordeals are justly entitled to take a leading position in the medical profession.

The second plan, which is less laborious and less expensive than the first. is very well adapted to those whose means are limited, and whose time of study is brief. Supposing the master to be a man of average honesty, and the pupil a youth of average intellect, the period of two years is spent not unprofitably in acquiring a general knowledge of the profession; but, supposing the master to be a man of intellect as well as honesty (and we know there are many such), the period so passed is valuable in the very highest degree. We need hardly state, that the idea of representing apprentices in the light of menials is merely a poetical fiction, which might have been applicable during the last century, when Parson Trulliber was regarded as a humorous sketch of some of the peculiarities of the English clergy, and when Captain Oakum and Dr. MacShane were admitted as portraits of certain characters who then figured in the British navy. We do not desire that the legislature should retain the system of apprenticeship; but we are quite confident that if it were abolished immediately, a plan of a very similar character would be voluntarily adopted in a vast number of cases.

The third plan is undoubtedly the worst that was every tolerated by authority, and is in our opinion wholly inconsistent with that discipline of

the mind which is absolutely necessary in learning a profession. Admitting, as we cheerfully do, that many young men who have been sent to study at one of our great metropolitan cities, have at once entered into a severe course of mental and moral training, and have eventually become ornaments of the profession; yet it is notorious, that multitudes of young men so situated, fall into idle and dissipated habits, and at the end of their academical or hospital career, manage to squeeze through their examination by the help of a grinder, or what is just as common, abandon the profession altogether in disgust. We cannot understand why the candidate for holy orders should reside for a certain time at college; why the embryo barrister should keep terms in one of the inns of court; why the future attorney should be articled to a senior in the same profession; why the junior officer in the army, or navy, should be for a period placed under the control of superior authority; and why the junior member of the medical profession alone should be exempted from all superintendence.

We do not hesitate, therefore, to express our decided opinion, that, putting the system of apprenticeship entirely out of the question, it is clearly to the advantage of the junior members of the profession that something of a collegiate course of education should be most strongly advocated; for, admitting that this system may not in all cases reform the vicious, or sober the thoughtless, yet it cannot be denied that such a system is more likely to be advantageous to the student than that which throws him at once upon his own resources in one of our great cities, without a friend to cheer his loneliness, and without a guide to direct his steps.

We conceive that all these circumstances have a most important bearing upon Medical Ethics; for as the child is father to the man, so must the student be the parent of the practitioner. We are not disposed to argue with any severity upon the follies of youth, and we are disposed to make many allowances for the exuberance of spirits which characterises the springtime of human existence; but it cannot be questioned, that it is the duty of the senior members of our profession, whether teachers, writers, or practitioners, to direct the dawning energies of the youthful mind in a proper course, and to impress upon the understanding the conviction of the importance of the mission which the medical practitioner is called upon to fulfil. Nor can it be denied that habits acquired in early life have a most important influence upon a man's future career; and hence we have urged, and shall continue to urge, most emphatically, the necessity of establishing habits of order and discipline at the earliest possible period. It is for this reason, that, in the absence of a collegiate system, we have refrained from joining some of our contemporaries in their denunciations of apprenticeships; for even supposing the practitioner, who takes an apprentice, to be a man without striking ability, yet, if he be a person of good moral character and respectability, the arrangements of his house will involve, on the part of the pupil, an attention to those minor duties and decencies of life, which, although apparently unimportant, have a very considerable influence in forming the character, and elevating the moral feelings. Under any system of medical education, a pupilage of two or three years with a practitioner would always be recommended, as a preliminary, or as an accompaniment to medical studies; and, indeed, the system of private superintendence has certain advantages over the collegiate plan; for, in the latter case, there is an uniformity of expense, which is inapplicable to all cases; while, in the former, the pecuniary arrangements may be made according to the means of the respective parties. It is also obvious, that a pupil who is placed in immediate personal contact with a practitioner must have numerous opportunities of acquiring a practical knowledge of many parts of the profession; and even if he be compelled to work at practical pharmacy for some time, we consider that it is advantageous rather than otherwise. We do not advocate the propriety of devoting *five years* to such a purpose; but we do not argue against

such a waste of time, simply because it is neither required by law, nor now sanctioned by custom.

We cannot help expressing our deep regret that some uniform plan is not adopted in all British universities and medical schools, for obtaining some evidence of preliminary knowledge from the pupils on commencing their medical studies. At the English universities we have seen that the student must pass an examination in arts; but in Scotland no such test is required; and hence it has often happened that students have entered upon, and have completed their medical career, without possessing even an elementary knowledge of the classical languages! We find, by referring to the Minutes of Evidence upon Medical Education, taken at a Committee of the House of Commons, that a considerable number of Scotch graduates have been rejected at the Apothecaries' Hall, in London, from their inability to translate prescriptions!! This lamentable result may be fully explained by the laxity of the system formerly pursued at some of the Scotch universities, where students were received indiscriminately, without any inquiry being made as to their previous education. While thus unequivocally condemning the practice of allowing students to complete their medical career without any reference to their attainments in general science, we are happy to notice, in terms of commendation, the following Regulation of the Royal College of Surgeons of Edinburgh, and we only regret that the amount of preliminary knowledge required should be so small. "Every candidate for the diploma of the Royal College must, either previously to, or during his medical education, have received regular instruction in the elements of mathematics; and must have subsequently attended a course of mechanical philosophy, of at least three months' duration, and of not fewer than sixty lectures." It is a pity that the student is not *examined*. Evidence that he has paid the money for lectures is not sufficient.

In Ireland, it appears that the constituted authorities are sensible of the importance to be attached to general science, as a preliminary to medical education. Trinity College, Dublin, requires that the candidates for the degree of Bachelor of Medicine shall have previously taken the degree of Bachelor of Arts, or shall have, at least, completed the usual education and examinations in arts of the first two years of the undergraduate course. The Royal College of Surgeons of Ireland requires that the candidate for examination should produce a certificate that he has passed a previous examination as to his acquaintance with the Greek and Latin languages. The Apothecaries' Hall of Ireland requires that every candidate shall be examined, *before his apprenticeship*, in the following books: the Works of Sallust; the first six books of the Æneid of Virgil; the Satires and Epistles of Horace; the Greek Testament; the Dialogues of Lucian; the first four books of Homer's Iliad; the first six books of Telemachus, the History of Charles the Twelfth (in French); the first two books of Euclid; and algebra.

The little work, of which the title stands at the head of the present article, is a very able address to the medical students of Queen's College, Cork, and we may state that the views advanced by the lecturer are quite in accordance with our own. We find, that in order to graduate in the Queen's University in Ireland, it is necessary that the student should pass a matriculation examination, and that he is recommended, though not compelled, to graduate in arts. Dr. Fleming, taking the same views as those which we have repeatedly advanced, argues very strongly in favour of preliminary education, in order to place the practitioner of medicine at least upon a level with the members of the other learned professions. He recommends the student to make himself acquainted with the classical languages before the commencement of his medical studies, and he very properly recommends, in addition, an acquaintance with the French and German languages. "Thus educated," says Dr. Fleming, "with his mind invigorated and stored with a large amount of general and useful knowledge, the student is prepared to enter with advantage

on the special and more complex studies of his profession, and he may aspire, not merely to the successful practice of a routine art, but to the complete knowledge and advancement of a most difficult science. *Your preliminary knowledge already tested by examination*, and your medical studies once begun, I recommend you to give your almost undivided attention to the latter. The earnest student is quickly enamoured of his studies, and, conscious of their extent and immense importance to his future career, is most unwilling to devote time to any pursuit not having a direct and obvious bearing upon his profession." Here we must pause for the present.

(To be continued.)

Remarks on Insanity: its Nature and Treatment. By Henry Monro, M.B. Oxon., F.R.C.P. 8vo. pp. 150.

Dr. Monro's object, in this very interesting essay, is to prove that insanity is a disease of a corporeal nature; that, without seeking for any more subtle or metaphysical cause, we may believe insane phenomena to arise from those states of *irritability* and *deficiency* of action in the sensorium which are the consequences of loss of nervous tone. That this loss of nervous tone is caused by a premature and abnormal exhaustibility of the vital powers of the sensorium; that this infirmity is essentially a local one, though torpor of the general physical and vital powers assists it; and that its origin is to be esteemed constitutional, congenital, and frequently hereditary.

"As a part of, and arising from this theory, the *coincident excesses* and *deficiencies* of mental phenomena, manifested by the insane, are attributed to the *coincident* existence (in different parts of the sensorium) of those two stages of loss of nervous tone; *irritable excess of action* and *paralysis*. This view of the case renders it unnecessary to believe that the violent excesses of the insane must arise from a too sthenic condition of the system; a doctrine which experience so much contradicts, but which the want of experience so often propagated."

These views are supported by a comparison of the history of insanity with the history of other imperfect conditions of the mind; as dreaming, somnambulism, voluntary abstraction of mind, passion, the mind of infancy, senile imbecility, intoxication, fever, etc.

They are then illustrated by an examination of the actual physical condition of the insane, including a discussion of the relation which the condition of the vascular system holds towards the disease. This is considered under the three heads of inflammatory action, deterioration of blood, and pressure. The depressed state of the general vital and physical powers of the insane are then reviewed; the existence of keenness of sensibilities is shown to be a frequent concomitant of such condition; and the proneness of the female sex to insanity is adduced as corroborative of the theory.

The whole concludes with the narrative of cases successfully treated in accordance with these views.

We cordially recommend this little work to our readers, as being the production of one fully and practically acquainted with the subject. At the same time we must record our conviction, that inquiries must be pushed still further before we arrive at the ultimate step. The *cause* of Dr. Monro's cause must be looked for and found, before we can ascertain correctly why loss of nervous tone produces these special phenomena, seeing that in numberless instances there exist nervous defects without one symptom of mental disease.

The Philosophy of Vital Motion. By Charles Bland Radcliffe, M.B. pp. 158. London: 1851.

This author, who has written a very good work entitled *Proteus, or the Law of Nature*, which was reviewed last year in this Journal, now comes

before the public with a philosophical work on physiology. As in his former work, Dr. Radcliffe exhibited considerable ability in bringing a great store of botanical and zoological knowledge to bear in his treatise on the *forms* of organic bodies, so, in the present work, he employs his resources in illustrating the nature of the *motions* which they perform.

He traces first the motion of fluids in the cells, and vessels, and intercellular passages of plants; then he treats of the motion of fluids in the lowest tribes of animals. Ascending in the scale of creation, he then describes the movements observed in the muscular coat of the alimentary canal, and involuntary muscles; and, lastly, he describes the vital motions of the heart, and the circumstances which influence its functions.

Although there is no originality in this little work, it is very well put together, and exhibits considerable powers of research and of condensation; and although we do not like it quite so well as the author's former publication, we consider it nevertheless a very creditable production.

Die Geburtshilfliche Praxis, erlaeutert durch Ergebnisse der II Gebarklinik zu Wien, und deren stete Vergleichung mit den statistischen Ausweisen der Anstalten zu Paris, Dublin, etc. Von Dr. F. H. Arneth, Assistent an der II Gebärklinik zu Wien. pp. 254. Wien: 1851.

[The Practice of the Second Obstetric Clinic at Vienna, compared with that of the Lying-in Institutions in Paris, Dublin, etc. By Dr. F. H. Arneth.]

This work consists of a statistical analysis of the cases admitted into the second division of the Lying-in Hospital at Vienna, from Oct. 15, 1847, to the same day in 1849. Prefixed is an account of the general management of the institution, together with a table, shewing the annual results from the time when it was built by the Emperor Joseph the Second, in 1774, to the end of 1849. The total numbers are; females admitted, 204,243; children born, 189,185; deaths of mothers, 7878, or 3·85 per cent.; of children, 11,092, or 5·86 per cent. In that part of the hospital which Dr. Arneth more particularly notices, the results, since it was opened in 1833, have been the following: children born alive,—males, 19,434, females, 18,573; born dead,—males, 859, females, 706; twin births, 442; triplets, 3; females admitted, 39,121; deaths of mothers, 1,583, of male children, 890, of female children, 621.

During the period included in Dr. Arneth's report, there were 6,527 women delivered; 3,280 male chileren, and 3104 females, were born alive; 118 males, and 106 females, were still-born; there were 88 cases of twins; 127 of the women, and 129 male and 115 female children, died. The statistics of the various complications occurring in obstetric practice are given, and illustrated by concisely reported cases. A very valuable feature of this work is, that the author has collected the statistics furnished by Mesdames Lachapelle and Boivin, of Paris, Drs. Boer, Klein, and Bartsch, of Vienna, and Drs. Collins, Mc Clintock, and Hardy of Dublin, Dr. Simpson, Dr. Oldham, etc., and has, partly in the text, and partly in tables, placed them in juxtaposition with the results of his own observations.

Puerperal convulsions occurred in 13 cases. Their more frequent occurrence in primiparæ is noticed by the author, who states that 8 cases out of 13 occurred under this condition. Of the 13 cases, was one of twins; one of delivery at the sixth month, and one at the seventh month. Ten of the children were males. The ages of the patients ranged from nineteen to twenty-eight years. The author adverts to the fact, that in nearly all the cases, observed by himself and others, the head of the child has been the presenting part.

Great credit is due to Dr. Arneth for his pamphlet; which we regard as a valuable contribution to the statistics of midwifery.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

ANATOMY AND PHYSIOLOGY.

CASEIN IN THE BLOOD; SYNTHETICAL PROOF BY FORMATION OF ARTIFICIAL MILK.

Dr. Panum, of Copenhagen, of whose interesting accounts of the discovery of Casein in the Blood, we gave a translation in the July number of this Journal for 1850, has published two additional articles on the subject in the *Bibliothek for Læger* for April and July 1850.

In his article in the April number, after recapitulating the facts brought forward in his previous paper, and pointing out the difficulty of establishing a chemical or a physiological distinction between casein and coagulated albumen, the author observes :

" If we institute a comparison between the substance precipitated from blood-serum by means of water and diluted acetic acid, and albumen separated in the same manner from its combination with soda, *we find* truly greater differences than can be distinguished between casein and coagulated albumen. . . . . .

" Before the publication of my former contribution, I had already performed various experiments with the view of instituting a more accurate comparison between the material under consideration and albumen separated from its combination with soda. To procure albuminate of soda, I separated the albumen from the serum, then added soda, and applied slight warmth. A greater or less quantity of albumen (according to the quantity of soda employed) entered into combination with the alkali as albuminate of soda, and was precipitated by acetic acid. A difference was here observed between the albumen of serum and that of an egg. For while albumen from an egg required no warming to promote its entering into combination with soda, or its precipitation by means of acetic acid, the albumen of serum had to be slightly warmed before it would unite with an alkali, or give a precipitate with acetic acid.

" The albumen which was precipitated from albuminate of soda, as above described, was always *soluble with difficulty, even in a considerable excess of acetic acid ;* eight or ten parts of acetic acid to one of albumen produced no solution. On the other hand, the material *originally* present in the serum, and precipitated from it by acetic acid, was soluble in so slight an excess of acetic acid, that it is almost a *finer test of the acid, alkaline, or neutral properties of the liquid, than litmus paper.* This difference seems important ; and can scarcely be without essential influence on the organic economy . . . .

" The precipitate thrown down by acetic acid from albuminate of soda, appears as *firm flocks,* which are not changed by shaking, and which resemble what is seen when a not too highly diluted solution of albumen is boiled. The other matter produces a perfectly homogeneous opacity in the liquid, and only after some time forms something like a solid deposit in the bottom of the vessel, which, however, immediately disappears, and is resolved into a general opacity, when the liquid is slightly moved.

" Moreover, if the albumen precipitated from a somewhat diluted solution by boiling, or from a solution of albuminate of soda by acetic acid, be collected in a filter, it forms, when half dry, *an elastic mass, by no means glutinous.* The other substance, on the contrary, when half dry, forms *a very glutinous mass,* almost like turpentine or bird-lime.

" The albumen, when collected in a filter, has, when dry, a *dirty yellow-*

brown colour. In my previous contribution, I referred to the circumstance, that the substance I am describing sometimes assumed a *beautiful green colour* when thoroughly dried. At that time, I attributed it more to accidental circumstances than to any essential difference, that the substance became green or yellow-brown on drying, as from the same serum I sometimes procured a green and sometimes a yellow product. I now find, that the substance is always of a beautiful green colour when the serum is perfectly clean and free from red blood-corpuscles. But if serum be used, in which there is found a greater or less number of blood-corpuscles, the green colour is effaced by the accompanying redness of the blood, and the product becomes either dirty yellow or dirty brown, according to the number of blood-corpuscles. The green colour is removed neither by alcohol, ether, nor water, and seems to belong essentially to the casein.

"However lightly these differences may be thought of, they are yet not less important than the distinction already referred to, between the so-called soluble casein and albuminate of soda. The preconceived opinion that the material under consideration must be albuminate of soda can thus no longer serve as a proof against its identity with what is called casein, or the essential nitrogenous constituent of milk."

Relative quantity in the blood. Dr. Panum states that he is engaged in a quantitative analysis of the casein in different individuals. He does not yet attempt to draw conclusions; but states that in 1000 parts of dried serum he has found in men, in 3 cases, from 4 to 7 parts; in 8 cases of women, from 5·5 to 12·5 parts. The greatest quantities (9·9—11·4—12·5) were in lying-in women shortly after parturition. In nurses there was an average of from 6·5 to 7·4 parts.

Formation of artificial milk. In the July number of the *Bibliothek for Læger*, Dr. Panum writes as follows:—"It occurred to me that the question of the identity of the material I have been describing with casein, might be solved by the *synthetical* method, which, though it can seldom be satisfactorily employed in scientific diagnosis, yet in the inability of analytical chemistry with regard to the protein compounds, is not to be despised. If it were possible, by adding the necessary constituents, to form from the substance under consideration some universally known product containing casein, such as milk or cheese, we should have a striking proof of the identity of the substance with casein.

"I obtained a quantity of serum from bullock's blood. To this I added acetic acid, in the proportion of six drops of concentrated acid to an ounce of serum, and then a considerable quantity of water. The substance described in my former contributions sank on standing to the bottom of the vessel, so that the superabundant clear fluid could be poured off. On again adding water and letting the substance sink to the bottom, it was rendered almost perfectly free from soluble albumen, etc. After it had settled as much as possible, the water was poured off, so as not to waste the substance, which remained suspended in a greater quantity of water than casein is diluted with in milk. It was now my object to find out, whether the solution of this substance produced by salts or an alkali could be brought to coagulate by contact with the mucous membrane of the stomach of kittens or puppies; and whether it were possible to produce a substance which, in taste and other circumstances, should agree with milk. But as it would probably be difficult to make animals use the solution as milk, unless the other constituents of milk, namely butter and sugar, were mixed with it, and as the taste and peculiarities of cheese might be modified by them, I first tried, by adding these substances, to produce a liquid which should have some resemblance to milk. At a temperature of 30 Raumur, I added to the milky liquid phosphate of soda, till all the supposed casein was dissolved. I then added butter and sugar in the proportions in which they are usually

contained in milk, and, after the butter was melted, I shook the whole mixture in a flask. The liquid, at first greyish or dirty yellow, became of the colour of egg-flip, and, as it cooled, became more and more like milk. The clearer and the less mixed with red blood-corpuscles the serum was, the clearer was the solution and the whiter the milk-like fluid. If the serum was perfectly free from blood-corpuscles, the emulsion, when diluted with water, had the same bluish colour as milk and water; but if there was a strong blood-red tinge in the serum, the solution in phosphate of soda had a reddish and the emulsion a weak yellowish tint. The product had a taste which bore a most striking resemblance to that of true milk; only it was a little more sweet, and left a feeble, though recognisable, bitter after-taste.

Under the microscope, I observed in the emulsion innumerable small globules, exactly like those in milk. On comparing them with those found in milk, scarcely any difference could be perceived, except that their average size in the artificial milk was somewhat greater than in the natural. The globules in the artificial milk were surrounded by a covering, and not simple drops of oil; this covering often showed a distinct though very fine folding, especially on the larger globules. The globules (like those of true milk) were not dissolved in ether, until the covering had been removed by treating them with nitric acid. But by the side of these small globules there were some which were somewhat greater, and presented in their interior appearances which, if they had been furnished from the organised body, would have been certainly considered as nuclei, granular cell-contents, etc. . . .

As the difficulties, which might have been expected to arise in the microscopic comparison of the artificial and the true milk, had so unexpectedly disappeared, I felt myself called on to inquire whether any more perfect imitation could be attained. The most striking difference, which the artificial milk presented on a superficial examination, was that it required a far shorter time than real milk to form a layer of cream on the surface, and that, after standing some time longer, a layer of clear liquid was formed at the bottom of the vessel. I ascribed this failure to the greater average size of the globules in the emulsion, as compared with true milk-globules. When I employed sugar of milk in place of common sugar, the emulsion was uniform, and shewed no layer of clear liquid at the bottom of the vessel, even when more water was added. At the same time, the average size of the corpuscles became less, so that they could not be distinguished by their size from the true milk-globules, and they were now free from any appearance of nuclei or granular cell-contents. The cream was longer in rising to the surface; and the great sweetness which the emulsion had, when made with common sugar, was no longer prominent, so that the liquid tasted still more like milk. A slight smack of salt disappeared, when the butter was washed in water; and a slightly harsh taste of the butter was still farther removed when unsalted butter was used, which had been freshly churned, and washed with water. There was still a slightly bitter after-taste, but this was removed by using carbonate instead of phosphate of soda; a much smaller quantity of the former salt being required to produce the required solution. It was now impossible for me to recognise, by the taste, any difference between artificial and real milk. As, however, it might be said that "*de gustibus non est disputandum*," I submitted the liquid to the taste of others, with the same result. . . .

It now only remained, to render the agreement perfect between the artificial and true milk, that the former should coagulate when brought into contact with the mucous membrane of the stomach. When I used common sugar, it was not wonderful that my attempts thus to make the liquid coagulate, failed; for it is well known, that the addition of sugar to milk retards or prevents its coagulation. But, even after I had used sugar of milk, I could not perfectly succeed in making the milk coagulate. Instead of fresh calf's stomach I used the artificially prepared swine's stomach, which

is commonly used in the dairies, with or without a temperature of 40 R.; and I also gave the liquid to two kittens, who drank it greedily, and whom I then killed. Under these circumstances, as well as by mere standing, the artificial milk turned, and separated into a clear liquid, and a thick curdy mass, which had very strongly the well known smell of sour milk; but I could not produce a consistent coagulum, which could be collected in linen, and pressed out. But when the original substance separated from the serum, after being washed from soluble albumen, was warmed, it formed masses resembling pressed curds, and could be collected on a cloth, while the liquid ran through quite clear.

The identity of artificial with natural milk, and of the substance found in the blood with casein, may seem to be not proved; yet the resemblance is so great as to strengthen the probability of their being identical. I have in vain endeavoured to produce from albumen, precipitated from albuminate of soda by acetic acid, and dissolved in phosphate or carbonate of soda, a liquid having the slightest resemblance in taste to milk.

WYMAN ON THE ARRANGEMENT OF CANCELLI IN BONE.

Professor Jeffries Wyman has stated these general conclusions as to the arrangement of the cancelli in human bones.

1. The cancelli of such bones as assist in supporting the weight of the body, are arranged either in the direction of that weight, or in such a manner as to support and brace those cancelli which are in that direction. In a mechanical point of view, they may be regarded in nearly all these bones as a series of "studs" and "braces".

2. The direction of these fibres in some of the bones of the human skeleton is characteristic, and, it is believed, has a definite relation to the erect position, which is naturally assumed by man alone.

These structures are most uniform and clearly defined in adult and middle-aged skeletons.

In the lumbar vertebræ, which support the weight of the body vertically, these cancelli run vertically and transversely, the vertical fibres directly sustaining the pressure, the transverse ones bracing them at right angles.

The neck of the thigh-bone is adapted to resist pressure by its oval form, the longest axis being vertical, and by the greater thickness of the wall of bone on its under side, to which the weight is more directly transmitted. Dr. Wyman describes another provision, which consists "in having the cancelli of each femur so arranged as to form a segment of a framed arch or truss, which co-operates with the external shell in sustaining the weight of the body; the necks of the two femora forming together opposite segments of an arch". He describes two sets of cancelli. One set rests or abuts on the convex surface of the thick shell which forms the under wall of the neck, and from this they diverge toward the upper portion of the head, neck, trochanter major, and portion of the shaft just below this last; those which extend into the head are much the longest. The fibres of the second series are arranged in parallel curves, the extremes of which are attached on the one hand to the wall of bone at the base of the great trochanter, and on the other to that portion of the preceding class of fibres which supports the upper surface of the head, as well as to the shell of bone between it and the trochanter. Both of these series are braced by other fibres, which are arranged at right angles to their direction. The cancelli of the great trochanter have no determinate form. The internal fibres thus act as braces, assisting the outer walls to support the weight of the body; the curved fibres resisting by their tenacity, the straight or radiating ones by their rigidity. The long straight fibres transmit weight directly to the under side of the neck, and are themselves supported by the curved fibres, and these in turn by the radiating fibres.

In the lower part of the femur and the tibia, the cancelli are adapted to support vertical pressure.

On the astragalus, the pressure is vertical; but this bone rests on two others; one below it, the os calcis, the other in front, the scaphoides; within there exist two series of cancelli, directing the pressure on the surfaces of support. Very nearly the same description applies to the os calcis, where there are two intersecting sets of fibres, the one radiating, the other in concentric curves.

These peculiar arrangements are not found in quadrupeds, and only traces of them exist in the apes, which most resemble man. In him, they are mainly or entirely confined to bones directly connected with locomotion. A certain direction of fibres in each instance coincides with a certain direction, or certain directions of the transmission of pressure. From this constant association of structure and function, says Professor Wyman, the inference seems unavoidable, that they are means and ends. [*Boston Journal of Natural History*, vol. vi, No. 1, p. 125, as quoted in *Trans. of Amer. Med. Assoc.*, vol. iii, p. 53.]

PRACTICE OF MEDICINE AND PATHOLOGY.

THE IMPORTANCE OF CERTAIN PREMONITORY SYMPTOMS OF SEVERE CEREBRAL DISEASE.

The following is a slightly abridged translation of an instructive memoir published by Dr. Devay, of Lyons, in the *Gazette Médicale de Paris* for January 4th and 11th, 1851.

Those severe cerebral affections which rapidly terminate existence, and still more those which, before the fatal issue, gradually destroy the intellect, sensation, and motion, have been the object of much research. Notwithstanding numerous physiological experiments, vivisections, autopsies, minute examinations of the different degrees of consistence and colour of cerebral substance, etc., the knowledge of the physician has been but little enriched. The cranial vault offers an inflexible resistance to exploration; and this should impress on us the necessity of depending less on anatomy in the study of cerebral diseases. Instead of studying the brain when it is dead or dying, we should fix our attention on the unusual manifestations, and carefully collect the various aberrations, either of sensibility or of motion. If we cannot examine the brain by palpation like other viscera, if we cannot auscultate it, as we do the heart or lungs, and thus seize on, by means of one or more of our senses, its successive degradations, we can, at least, detect its commencing affections, by observing the derangements of the functions over which it presides—the intellect, sensation, and motion.

Researches of this kind embrace the premonitory symptoms of diseases varying in their anatomical relations; they take a view of all those affections which arise from an alteration in the brain, properly so called, from apoplexy to mental alienation. But even when, in a given case of cerebral disease, the elements are most favourable, a diagnosis can only be formed with reserve. Thus, when we expect to find softening, we may meet with induration of the cerebral substance; we may expect to find tubercles, and discover hydatids, or osseous tumours. The phenomena presented by patients have not then always that conformity, which would permit particular symptoms to be accurately referred to certain determinate forms of pathological affections. This clinical difficulty in the appreciation of the symptoms of confirmed disease, exists in an equal degree with regard to the interpretation of the premonitory symptoms. These may point to a functional derangement of the encephalon, without any anatomical lesion; and, when the latter is present, it may vary in its form. The infinite variety of forms,

presented by the symptoms of a cerebral disease, can no more be explained by the various conditions in which the organ is found, which has been their seat, than the different modes, in which the same function is performed in different individuals, can be accounted for by anatomical differences in the part which is its instrument. Nevertheless, the study of premonitory symptoms may be useful, even for the anatomical diagnosis of the affection.

After having devoted a considerable number of years to the attentive observation of the severe affections of the brain, we have become convinced, that there *most frequently* exists, especially in those which have a chronic course, a precursory stage, the signs in which are the diminutives of those symptoms which will, at a later period, constitute the more advanced degree of the disease. Thus, slight want of power in the lower limbs, and defect of precision in certain movements, represent paraplegia, or complete paralysis; and a slight alteration of the intellect bears the same relation to the delirium following it. In certain cases, without doubt, a sudden effusion of blood, breaking down the cerebral structure, may suddenly cut off an individual who a few moments before seemed in perfect health; in this case we admit that there has been no intermediate stage—that the index to the explosion has not existed. But this is by no means the case in a very great number of other forms of apoplexy, in which, as may be easily proved by examples, the precursory symptoms, denoting cerebral lesion, may continue for a long time. These forms of cerebral hæmorrhage enter then into the category of those severe affections of the brain—softening, induration, mental alienation, etc. —where a hidden molecular change has been going on before they have declared themselves. Andral, in speaking of certain premonitory symptoms of cerebral hæmorrhage, says: "Their existence incontestably proves that, before the blood is effused, there is already a morbid action going on in the brain, the nature of which it would be important to determine."

I. Premonitory Signs, furnished by the Intellectual and Moral Faculties. Almost all authors of repute have mentioned, without always attaching much importance to them, the disturbances of intellect which precede attacks of severe cerebral ideas. M. Gendrin says: "Apoplectic attacks are often preceded by a difficulty in undertaking intellectual work, by an incapacity for unusual attention, by an extraordinary irascibility, by a morose weakness which exaggerates impressions, and produces terrors without a cause, or by unreasonable anxiety concerning ourselves, or those related to us."[1] Insanity also has its period of incubation, its premonitory symptoms; and frequently it is found that the first act of insanity, which caused alarm, has been preceded by several symptoms which had escaped observation, and sometimes the first phenomenon of the disease has been taken for its cause. The insane often combat their false ideas, before the disorder of their reason, and the internal contest which precedes the explosion of their madness, are perceived.[2] The most general precursor of every severe affection of the brain is a state of *cerebral lassitude*, presenting much analogy to that state of intellectual torpor which follows severe or pestilential fevers. There is observed in the habitual gesture of the patients, in their attitudes and movements, a total absence of what may be called the consciousness of action. The brain seems to have lost its *balancing* power over the *ensemble* of the functions of the life of relation. These patients are often in a constant state of slight habitual vertigo, which they call *weakness of the head*, and which is frequently accompanied by debility in the limbs.

The *memory* is frequently impaired in the precursory period of cerebral affections. Thus, patients have forgotten the names of their friends, or of the most common things. In conversation, they have difficulty in finding

[1] Gendrin. Traité philosophique de Médecine pratique, tome i, p. 487.
[2] Esquirol. Des Maladies Mentales, tome i, pp. 77 et suivant.

the proper word to express their meaning, and are obliged to make use of circumlocutions. More rarely, the memory becomes more powerful; it seems to take a new flight, and reproduces, to the great astonishment of the patient and his attendants, events which had seemed to be entirely forgotten. The curious and inexplicable fact *of reminiscence* corresponds to the exaltation of the special sensibility of certain senses. It is sometimes observed after a slight attack of apoplexy. Professor Brachet has communicated the case of a man, aged 50, who was attacked with apoplexy: he preserved his speech, but could only express himself correctly in the *patois* of his country, which he had entirely forgotten while in health.

Next to the impairment of the memory, and also of the attention, which is fixed with difficulty, or not at all, on objects presented to the notice of the individual, the most striking change is in *volition*, which is diminished. The man who has hitherto been most firm, who has shewn most tenacity in his views, who has pursued the plan of his life with great determination, becomes, in a measure, like the toy of a child; those who are about him, even his inferiors, can command him. Human depravity has often taken advantage of this moral decadence for culpable ends; and the man who has hitherto most rigorously and carefully managed his affairs, is all at once spoiled of his goods, either by extorted donations, or by burdensome expenses. The public see in these cases *bizarreries* of character; the physiologist and the physician see in them the first expression of a pathological condition. This weakening of the will, which, according to our observations, is chiefly connected with those cerebral lesions which lead to lunacy, or to paralysis of the insane, necessitates an alteration of the judgment. . . . . The will is the result of the other faculties; and it is not because it is wanting in the idiot, or lunatic, that they are irresponsible; but rather because they are ignorant of the rules which should direct it.

There is but a slight transition from this to *perversion of the moral faculties*—one of the most mysterious points in psychology. It would seem as if the balancing power of the brain, which regulates the locomotive movements, were also defective as regarded the moral part of the man, so that he fell under the empire of instinct. Hence arises degradation of ideas, and lascivious conversation, in persons who have hitherto appeared full of decency and modesty. And this vitiation of the moral faculty may break through the sphere of theory, and become realised in action. This fact is important in a medico-legal point of view. . . . .

The already important and difficult question of moral responsibility will become more delicate, under the supposition of a commencing affection of the organ of thought. When a person of hitherto irreproachable character commits a reprehensible action, the physician is disposed to plead extenuating circumstances, not because the case demands it, but for the sake of human nature, knowing all the aberrations of which it is susceptible. Experience also should be invoked, as well as reason, in deciding on so delicate a case.

I am now attending a woman, aged 42, who for a year and a half has gradually fallen into a state denoting general softening of the brain: almost entire blindness, inability to walk, semi-stupid intellect, etc., etc. Two years ago, she only felt severe and almost constant pain in the head; her general health was in other respects perfectly good, her intellect clear. Three years ago, this woman, though possessed of a competency, *committed a petty theft in a fair*. Dr. Brierre de Boismont, in his observations on General Paralysis of the Insane, states that this disease is preceded by a premonitory period, for about six or seven years, or more, before the apparent explosion of the insanity. There are *perversions of the moral and affective faculties*, without less ability on the part of the individuals presenting these changes to fulfil the duties of social life, or to perform their functions. The acts of indecency of dishonesty, of debauchery, like which there had been nothing before, are

suppressed and compensated for ; then at last the patient is seized with symptoms of general paralysis.

"A person high in office," says Dr. Brierre de Boismont, "had performed the duties of his station up to the time when I was consulted ; and yet the details, which were furnished to me by his wife, left no doubt that his moral and affective faculties had been for some time impaired. From having been generous and honest, he had, for more than six years, exhibited a degree of sordid avarice and unbridled licentiousness. With the progress of the disease, his avarice was manifested in mean actions ; he refused to pay his debts, maintaining that he had already done so ; and even purloined objects from the houses of his acquaintances. Until the last-named acts were committed, no one had suspected that his mind was disordered. . . . Some time after, I was called in consultation to see a retired public officer, whose thefts had made much noise some years previously. The particulars with which I was furnished regarding this interesting subject, made me then think that this person was labouring under the premonitory symptoms of general paralysis ; I was almost sure that I should see a paralytic lunatic. The first words which he uttered in my presence showed me that the affection was far advanced. His delinquencies had been noticed eight years before ; and it was only a few months ago that mental alienation was recognised."[1]

Dr. Passot has recently observed a case, in which delirium tremens appears to have been the proximate cause of the moral disturbance which supervened at a later period. Although differing in some circumstances, and although the proof *à posteriori*, that is, by the termination, has not yet been furnished, this case appears to have some resemblance to those related above. A cooper, aged 34, previously of irreproachable character, and enjoying a high reputation for honesty, was seized with delirium tremens, from which he recovered. But from this moment his conduct was deranged ; he borrowed money from all quarters, and denied having ever received it. At last, after having cheated many, he fled to avoid prosecution, His intellect appeared sound ; but Dr. Passot remarked, that he gave proofs of a considerable impairment of judgment, by asking persons for money from whom he had already borrowed.

These and similar examples show what difficulties are presented in this new point of view of the doctrine of moral responsibility, and how much the question requires to be elucidated by an attentive study of the precursory symptoms of encephalic affections. It may be—and there is no physiological improbability in the supposition—that an immoral or obscene action is as abrupt and unexpected an occurrence as an aberration of the senses ; one of those irregular paralytic affections which almost infallibly denote an approaching disorganisation of the nervous centres. If there is a concomitance between the two occurrences, the aggregate of the pathological symptoms may be considered as furnishing evidence in favour of the non-culpability of the subject. But unfortunately the proof is often furnished only when the disease is confirmed—when the cerebral symptoms are already strongly marked. It will then be easy for the physician to trace the connexion between the previous act of the patient, and the symptoms which now appear ; but will not the patient have already suffered the rigorous application of penal laws ? This is a delicate problem, for the solution of which a most careful exercise of the conscience and knowledge of the physician is required. If any one is called on to give his opinion to enlighten justice regarding an infraction of morality, *committed without precedents*, in a moment when the individual is in full possession of the faculties of relation, he should express such opinion with the great reserve. It will be for him to institute a searching and severe inquiry into the previous condition of the patient, his attitudes, his sleep, his will, his memory, his sensation, etc. ; and perhaps he

[1] Gazette Médicale de Paris, 1847, p. 393.

may then be able to discover some sign, from which he may deduce the irresponsibility of the subject.

The abrupt changes which may occur in a man's tastes, in his inclination, in his manner of living, in a word, in his social aspect, are worthy of attention. Modifications of this nature, when they do not appear in a slow and progressive manner, do not arise from the action of moral influences, and can only arise from a change in the nervous system. Thus it has long been remarked, that unusual gaiety in a habitually grave individual may denote the approach of an attack of apoplexy. It is the same with those who suddenly seek for noise and bustle, after having loved retirement and quietness for a great part of their life. We have known a man, aged 57, who, having up to that time led a grave and even austere life, gave himself up to the pursuit of amusements unsuited to his age, and was, a few months after, seized with sudden and complete apoplexy (*apoplexie foudroyante*). In this case, which we observed a few years ago, we were led to form an unfavourable prognosis. A man most estimable for mental endowments, and for the qualities of his heart, came one day to converse with us on subjects not relating to his health. His conversation was clear; nothing was indicated in his gait; but he had for some time complained of inaptitude for work. While we were occupied in writing a letter, we saw him rise, rummage a drawer, and open a note. This act, on the part of a person of the most polite and discreet habits, struck us forcibly. We connected it with two other circumstances which were known to us. During the revolution of February, this gentleman, holding an important post in the administration, had engaged, from the most disinterested and praiseworthy views, in public agitation, from which his mind had received a strong impression: his mother had also been attacked with senile dementia. Three months after, the patient lost his sight after violent headaches, and he subsequently died, with all the symptoms of cerebral softening. A complete change in the turn of the ideas, when it is not the result of advanced age, when it manifests itself in a short period of time, and when it cannot be traced to the action of moral influences, is very suspicious. We have known a young physician, who exhibited this phenomenon in a very marked manner, and who, a short time after, was seized with paralysis of the insane. When we knew him three years before, he was very free in his assertions, and inclined to exaggerate; but he had become discreet, and wary in his speech. His former condition, and the medium in which he had lived, shewed sufficiently that this change could not be the effect of a *progressive amendment;* we considered that there was some disease, and our opinion was ultimately confirmed.

It is conceivable, that the same psychological perturbation which changes the moral sentiments may likewise impair the sentiment of self-preservation; and hence that *suicidal melancholy* may mark the commencement of a severe affection of the brain. This disease is, moreover, very often conjoined with a lesion of the intellectual and affective faculties.

II. Premonitory Signs furnished by the Sensorial Functions. Most of these are furnished by the sense of *vision*. We will merely mention dimness, the appearance of objects as if coloured red, photophobia, etc., which may indicate threatening meningitis, as well as cerebral hyperæmia; these symptoms bear an especial relation to acute diseases of the encephalon. These signs may exist several years before the explosion of the disease. Before attacks of apoplexy, impairment of vision sometimes exists in a high degree without being known to the patients, especially when, as is most commonly the case, it is not sufficient to prevent them from seeing those who are about them. The mistake is the more easy, as this symptom may be limited to one eye; the other compensating for the weakness of its fellow. Amblyopia is a frequent symptom; sometimes there is complete blindness, as in the case of the Baron Hornestein, cited by Wepfer (*Anatomia Apoplecticorum*), who became blind three weeks before a fatal attack of apoplexy.

A valuable sign, belonging in some degree to what may be called the expression of the eyes, consists in a want of parallelism in these organs ; it is not squinting, nor is it the look of hallucination. It seems pretty well defined by the following expression : *The eyes are not in the axis of the reason.* There may be certain defects in this relation pointed out between a material object and a moral fact ; but those persons who are accustomed to scrutinise the human look, and to see reflected in it the different passions, will easily understand me.

The phenomenon of exaltation of special sensibility, as a precursory sign of a severe encephalic lesion, is sometimes met with. It is in this case, as in other circumstances in which it is observed, one of the most mysterious problems for the physiologist.[1] It is well known that hearing often becomes excessively acute before attacks of apoplexy. The patients, incommoded by the least noise, become irascible ; they perceive distant sounds, which are unheard by those who are with them. This fineness of hearing must be distinguished from the perception of strange and imaginary sounds, which is nothing but a sensorial hallucination.

The following is a case in which disease of the brain was first indicated by enlargement of the field of vision.

Case. A painter, aged thirty-two, was admitted in 1849 into the Hôtel-Dieu at Lyons. This young man, who was possessed of some talent, had been gradually reduced to distress, partly by political disturbances, partly by other causes. A year before entering the hospital, his sight, which was previously good, acquired greater development ; from his window, which opened into a very long street, he could distinguish objects and persons whom he could before neither distinguish nor even see. This circumstance troubled him, and surprised those about him. The exaltation of vision continued until August 1848, when he was seized with violent continued pains in the right parietal region ; at this time there was slight weakness in the left arm. The symptoms increased till March 1849, when there was paralysis and contraction of the right arm, and blindness of the left eye. When he entered the hospital in July, the following was his condition. There was almost complete stupor ; the paralysed eye was almost completely covered by the upper eyelid ; there was paralysis, with contraction, of all the left side of the body ; the urine and fæces were discharged involuntarily. He continued in this state until the beginning of September, when death ensued, preceded by symptoms of slow fever. The autopsy revealed partial circumscribed softening of the middle and upper part of the right hemisphere, for the extent of about two *centimètres* ; the convolutions were pale and puffy ; the pulp was diffluent, and of a dirty grey colour. Except the corpus callosum, which appeared soft, the rest of the cerebral substance was sound.

This phenomenon, judging from a passage in the writings of Andral, seems to have been observed in other cases. " Cases have been observed in which, for a longer or shorter period before the attack, the sight has acquired an unusual degree of fineness. The existence of these important phenomena, which are often presented by vision at a larger or shorter period before the occurrence of hæmorrhage, prove incontestably that, before the blood is effused, there is already some morbid action, either continuous or intermittent, in the brain, of which it would be important to determine the precise nature."[2]

The sense of *hearing* may present the same modifications as that of vision. Some persons are tormented with drumming in the ear, with continued or intermittent tinkling. Some believe that they hear the most strange noises. These hallucinations are by no means the constant precursors of an encephalic

[1] See the *feuilleton* of the *Gazette Médicale* for 1848, t. iii, p. 41, where several cases of exaltation of the senses are related.

[2] Andral. Clinique Médicale, tome v.

attack; they may be connected with simple perversions of the sensorial function.

Premonitory Signs furnished by the Organs of Motion and Sensation. The alterations in the *muscular functions* present great variety, from the simple hesitation which we have already noticed, to paralysis which is complete, but which, on account of its nature and its seat, we shall denominate *irregular paralysis*. It is not uncommon to observe a state of general languor which makes the patients seek for rest—for the *far niente*. Van Swieten has remarked, in treating of apoplexy: *Primò oritur languor et amor quietis et otii*. At other times, those who are about to be attacked with cerebral disease are much agitated, and expend a great amount of activity in their movements. Dr. Tessier has lately attended a lady, aged 60, who from the critical age, has been subject to attacks every month, at the period when she used to menstruate. She loses consciousness; and, after having recovered her senses, is paralysed on one side of the body, with great embarrassment of speech. These symptoms continue some days, and gradually leave her, to return at the fixed period. But some days before the new attack, this lady, though usually quiet and peaceable, exhibits much agitation; she cannot remain in her place, and those who are about her always know what this sign means. In this case, we recognise an example of *periodic nervous apoplexy*.

Impairment of muscular motion is exhibited in various degrees. It is especially remarked in the lower limbs, which seem to bend under the weight of the body, and render the gait rather unsteady. This debility is the more striking if the person be young, and has no apparent cause for it. Portal was able to prognosticate an attack of apoplexy in a gentleman apparently in perfect health, from observing a slight fixedness in the left eye and a slight weakness in the leg of the same side. *The digitus semi-mortuus*, noticed by Dr. Marshall Hall, is one of those instances of *irregular paralysis*, of which it is so important to determine the true signification. Some time ago, we saw the following case. A man, aged 54, one day called on us. In conversation, he jokingly noticed a sort of deadness which he felt in the little finger of the left hand, while the rest of the hand was able to perform its ordinary functions. We advised him to put himself under treatment: he neglected this advice, and some days after was seized with cerebral congestion, which left his faculties remarkably weakened. The *digitus semi-mortuus* has shortly since been noticed in a valuable communication from Dr. Gillet de Grandmont.[1]

Irregular paralyses, which seem to arise from exhaustion of the sources of the sensitive and motor powers, may appear under circumstances in which they do not constitute a symptom of such great importance. Such are those which sometimes follow hysterical convulsions, lead-colic, venereal abuses, etc. Here, these phenomena are connected with *transient* modifications of innervation. The suddenness of the attacks, their frequent isolation from other symptoms, their seat in parts distant from each other, while those lying between preserve the integrity of their movements, constitute the exceptional characters of those palsies which are connected with a latent alteration in the nervous centres. We must not lose sight of the difficulty of deglutition which some patients experience some time before being attacked: as well as the semi-paralysis of the vocal cords and tongue, giving rise to stammering or aphonia. The paralysis of the upper eyelids, which become œdematous, is also a sign of great value.

General sensibility may be abolished, simply diminished, or exaggerated. The two first forms almost always follow muscular paralysis; but they may

[1] Gazette Médicale, 1850, p. 400. A translation of Dr. de Grandmont's letter was given at p. 698 of the London Journal of Medicine for July 1850.

exist alone. Sensibility may be exaggerated in two forms. The patients may present hyperæsthesia, or exquisite sensibility of the whole cutaneous surface ; so that the least touch troubles them. This is an increased anormal sensibility—an exaggeration of the sense of touch, corresponding to the exaltation of the sensorial faculties which we have already studied. Sensibility may also be exalted in the form of pain ; and this merits our most careful attention. Violent pains, precursory of a severe cerebral lesion, have often been mistaken for neuralgia. The same is the case in treating cephalalgia, supposed to be dependent on dyspepsia : and this error is more readily fallen into, as the stomach is often disordered. The diagnosis in these cases is sometimes difficult ; but the duration and violence of the pain will lead to the suspicion, that there is something more than ordinary headache, and that, although the functions of the stomach are troubled at the same time, the headache is often too intense to be accounted for by the state of that organ. The patient cannot in general endure a warm room, nor the noise made by persons about him, nor even the fatigue of agreeable conversation, without suffering an aggravation of his headache. The paroxysms are sometimes accompanied with vomiting, and sometimes with violent beating in the head. If with these symptoms we remark paleness of face and weakness of pulse, and if active measures have been employed without benefit, we are led to suspect the presence of organic lesion.[1] Painful cramps are not unfrequent. Portal has seen patients who suffered severely from cramps in the legs before an attack of apoplexy.

Cutaneous sensibility presents other singular modes of perversion. A case is related of a man who, several months before being attacked with apoplexy, experienced from time to time an absolute loss of sensibility on five or six isolated points of the skin of the thorax, each of about the size of a five-franc piece. Here the skin might be pinched without causing any pain ; beyond, the sensibility was perfect. These partial abolitions of sensation were not constant. On some days there was not the least diminution of sensibility ; then suddenly, and simultaneously, it was annihilated in the isolated portions. Such unusual modifications of functions directly dependent on the brain, ought to furnish us with arguments in favour of the possibility of moral and instinctive perversions, and of their dependence, not on the corruption of the moral faculty itself, but on a latent pathological condition of the organ. Hence arises the doctrine of irresponsibility.

It is in the life of relation that indicatory signs are especially to be looked for. At the initial period of severe cerebral disease, organic life reveals few or no disturbances. The symptoms which may exist under this head only acquire value in connection with those which are derived from the life of relation. The brain must be much affected to produce changes in the nutritive function. Excepting sleep, which is on the confines of animal and organic life, there is not in the latter any essential functional disturbance. In the initial period, most patients have lost the power of sleep, or, if this function be performed, it is rather a fatiguing drowsiness than refreshing sleep. The digestive functions present no other special disorder than obstinate constipation, which is often difficult to be overcome by drastics. The eyelids sometimes become œdematous ; and, in some subjects, attacks are preceded by small effusions of blood, even in the tissue of the conjunctiva. The secretions are but little altered. The urine is sometimes highly albuminous ; but this is a subject for further researches.

In subsequent communications, Dr. Devay proposes to treat of the etiology and treatment of incipient cerebral affections.

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[1] Abercrombie. Diseases of the Brain, p. 453.

SURGERY.

REMOVAL OF NASAL POLYPI.

Dr. D. McRuer, of Bangor, Maine, has been in the habit, for some years, of employing the following method for the removal of gelatinous and soft polypi of the nasal passages.

A piece of catgut is passed from the nostrils to the mouth, to which is fastened a piece of soft and dry sponge, corresponding in size, when firmly compressed, to the narrowest part of the nasal passage; it is then gently drawn forwards by the posterior fauces through the nose, and, in Dr. McRuer's experience of at least ten cases, it has never failed to bring with it all the morbid growths much more effectually and easily than could possibly be accomplished by the old methods of forceps, ligature, etc. [*Trans. of Amer. Med. Assoc.*, vol. iii, 1850, p. 361.]

DISPLACEMENT OF HARD CATARACT BY LATERAL TRACTION.

Professor Pancoast, of Philadelphia, describes the following operation for the removal of hard cataracts, which he says he has practised in about twenty cases during the last two years, with no permanent failure, and with very little, or generally no apparent pain or inflammation.

"The removal of the opaque lens by the common couching process, when it is found too hard to admit of division without rolling on its axis, is, I believe, admitted to be greatly superior, in its general results, to any other process. But the success attending this mode of operation is not by any means so great as could be desired. In the hands of the most skilful operators, complete success is not obtained, perhaps, in more than six cases out of seven, the general average being infinitely below this. The causes of failure may be said to consist in the subsequent re-elevation of the cataract; in the violent rupture of the delicate mechanical connexions of the inner tunics of the ball made at the time of operation; in the injury of the iris and ciliary processes inflicted by the needle, or caused by the pressure of the lens, couched improperly so as to press against these sensitive and probably muscular structures; in a severe disorganising inflammation speedily following the operation, or one of a more chronic character, which finally leaves the retina amaurotic.

"I keep the iris, for several days previous to the operation, thoroughly dilated by the application of belladonna. I puncture the sclerotic coat at a distance nearly equal to the diameter of the lens behind the margin of the cornea.

"The needle I employ is modelled from that of Scarpa, but with a longer and more sudden curve, and reduced to the smallest size allowable, in order to have it to pass through the sclerotic coat, so that I may, with its diminished bulk, disturb as little as possible the interior structures of the ball. A curve of the needle, almost amounting to a rectangular turn, I deem indispensable. The needle, after it has entered the hyaloid humour, is carried forward in the usual manner, so as to break between the edge of the lens and the ciliary body into the aqueous chamber, at a point where the hyaloid tunic forms alone, in all probability, the posterior wall of that chamber; and in doing this the ciliary processes or the iris need not be touched. The needle, after being made to divide the capsule of the lens in the usual manner, is to have its hooked part sunk into the centre of the lens. The lens, instead of being pressed down as in the ordinary process of couching, is to be gradually drawn horizontally backwards, through the same track by which the needle has passed, to the place of puncture made in the sclerotic coat. The handle is then to be depressed, and the needle detached from the eye. By this process the eye is as little disturbed as possible, and the lens rests in the interior of

the hyaloid tunic, and not in contact with either one of the more delicate structures of the ball, the iris, the ciliary body, or the retina, and with no tendency to resume its old position.

"In the same way, and with the same success, I have several times displaced secondary capsular cataracts. If the lens proves to be soft, it cannot, of course, be displaced, but may readily, with the same needle, be broken up in its bed. Occasionally, where the lens has been large, I have failed in drawing it horizontally backwards, in the gap made by the needle, and have been obliged to couch it in the usual manner. But in the hard cataracts of old persons, the kind that we have perhaps most frequently to deal with, and which are usually diminished in size, the displacement by this process, with a needle of the kind above described, will be found an easy and satisfactory operation." [*Transactions of American Medical Association*, vol. iii, 1850, p. 365.]

OVARIOTOMY: RULES FOR THE OPERATION.

Mr. J. G. Wilson lays down the following rules for the operation. 1. To make as small an incision as possible. 2. To draw out only as much of the cyst as could be extracted readily, and without displacement of the other contents of the abdomen. 3. To endeavour to keep the wound always filled with the cyst, so that neither air nor fluid should be admitted into the cavity of the abdomen. 4. To cut off the cyst, not close to the wound, but from one and a half to two inches beyond it, so that when the portion of cyst has been removed, the cut margins could be carefully examined, and the vessels secured. 5. To secure each vessel in the cut margin of the cyst separately by fine silk, and to cut off both ends close, so as to have no ligature hanging from the wound. 6. To close the external wound as quickly as possible. [*Prov. Med. and Surg. Journ.* Jan. 22, 1851.]

TANNIN IN OPHTHALMIC DISEASES.

M. Hairion of Louvain has a very high opinion of Tannin in eye-diseases. The following remarks by him are quoted from the *Journal de Médecine et de Chirurgie Pratiques* for October 1850.

Tannin has, probably, been only used in catarrhal ophthalmia, in the proportion of one part to 120 of water; but the want of efficacy of this solution has made it fall into almost complete disuse. For more than five months, I have employed tannin in the form of pommade, in thick mucilage, in fine powder, and especially in concentrated solution (one part to three of water). The affections in which it has proved most successful have been acute and chronic blennorrhœa, œdematous swelling of the conjunctivæ, vegetating granulations, vascular and ulcerative affections of the cornea, and especially pannus, which has been cured, in some cases, with astonishing rapidity.

Tannin has been justly styled the styptic *par excellence;* its local mechanico-chemical action renders it highly useful in ophthalmology, whether to retard muco-purulent effusion of the conjunctiva, to combat the relaxation of that membrane, to obtain the obliteration of cellulo-vascular productions, or to diminish dilated or newly-formed vessels; or, by producing coagulation of the plastic fluids, to accelerate the cicatrisation of ulcers of the cornea, strengthen its softened tissue, and prevent its projection or laceration.

This remedy is free from the objections which may be urged against other astringents. Its application is not painful, it produces no severe reaction, and leaves no caustic marks, nor indelible incrustations.

Tannin has been employed in the circumstances indicated above, frequently with signal success, sometimes without advantage, never with injury.

MATERIA MEDICA AND PHARMACY.

DUTCH LIQUID AS A LOCAL ANÆSTHETIC.

M. Aran has recently communicated to the Academy of Medicine in Paris a paper on Local Anæsthesia. The following are his conclusions, given in the *Gazette Médicale de Paris* for 23rd November 1850.

1. All general anæsthetics (the ethers, chloroform, Dutch liquid, aldehyde, benzine, etc.) possess also the property of inducing local anæsthesia.

2. The energy of the local anæsthetic power is in an inverse relation to the volatility of the substance. This explains why Dutch liquid is superior, as a local anæsthetic, to all others, why chloroform is better than ether, and acetic ether than the other ethers.

3. Some anæsthetics, as the ethers, aldehyde, and benzine, produce no irritation when applied to the skin ; others, again, are more or less irritating. Chloroform produces, in small quantity, a burning sensation, and may even produce vesication, if the quantity be greater, and contact more prolonged. Dutch liquid is irritant ; but infinitely less so than chloroform.

4. The local anæsthetic action of Dutch liquid continues longer than that of other substances, even when only from fifteen to thirty drops are applied to a painful part. It only produces slight stimulation, and has a slight ethereal odour, more agreeable than that of the ethers, aldehyde, or benzine.

5. To obtain local anæsthesia, from fifteen to thirty drops are to be dropped on the painful part, and the whole covered with a wet compress and a piece of waxed cloth (or oiled-silk). This succeeds in most cases, where local anæsthesia is indicated.

ELIMINATION OF ARSENIC IN ARSENICAL CACHEXIA.

The *Brit. and For. Med.-Chi. Review* (Jan. 1851) quotes the following remarks of M. Hannon, from the *Revue Médicale*, vol. i, 1850, p. 754.

By Arsenical Cachexia is meant that special deterioration of the economy, which those who have absorbed into their system a certain quantity of arsenic undergo, and which is of more frequent occurrence than is supposed. The health of many workmen in the trades in which arsenic is employed is thus injured, as is that of children by sweetmeats coloured by arsenite of copper. So, too, after the injurious employment of arsenic in medicine, and the treatment of cases of poisoning by emetics and antidotes, the patient is never cured until the arsenic has been expelled from the economy. It will remain in the system, until it has been rendered soluble by combination with some body, and thus eliminated. M. Hannon believes that *sal ammoniac* effects its elimination, as completely as the iodide of potassium has been shown by Melseus to eliminate lead and mercury. He believes, too, that arsenic may be prevented from accumulating in the economy by combining this substance with it.

ALOIN : THE CATHARTIC PRINCIPLE OF ALOES.

The Messrs. T. and H. Smith of Edinburgh (to whom pharmacy is indebted for many discoveries and improvements), have succeeded in separating from aloes a crystalline substance possessing the characteristic effects of the crude drug ; and, which from a perusal of the paper before us, we think the authors correctly regard as the cathartic principle of aloes. The history of this discovery is given in the *Edinburgh Monthly Journal* for February 1851 ; and an account of the chemical characters of Aloin is contained in a paper by Dr. Stenhouse in the *London, Edinburgh, and Dublin Philosophical Magazine* for Dec. 1850. Some of the chemical properties of aloin are very remarkable.

The action of doses of aloin on the human body is thus described by the

Messrs. Smith : "The first trial was made with half a grain. It acted twelve hours after being taken, in the manner that so characteristically distinguishes the action of aloes. The same quantity was again given to two healthy young men, with a similar result ; except that in one about twenty-fours elapsed before its operation. In the next two cases, one grain failed to act ; but in one of these, the dose having been increased to two grains, a very strong operation was the consequence. In a case where four grains were given, the person, a patient of Dr. Robertson, Physician to the Edinburgh Royal Infirmary, had been getting one-quarter grain doses of elaterium with little effect. The operation in this case was rather violent. In numerous other cases in which it was tried, it invariably operated in doses of from one to two grains. The result of these trials was the removal from our minds of every doubt of the crystalline body yielded by the aloes being that on which its cathartic action depended, being, in fact, the active principle of the drug."

DORVAULT ON IODINE AND ITS COMPOUNDS.

M. Dorvault is a Parisian drug-vendor, and not a physician ; a circumstance which greatly lessens the value of his monograph, in so far as it relates to the therapeutic value of Iodine and its compounds. Nevertheless, it has merit as a compilation ; and there are in it some good remarks upon the chemical and pharmaceutical departments of the subject : and these are pretty fully noticed in the *British and Foreign Medico-Chirurgical Review* for January 1851, p. 91.

The *modus operandi of Iodine* is thus announced by the author : "Iodine is a specific fluidifier, and every morbid affection recognising for its cause or effect a humoral coagulation, more or less plainly indicates its employment." It has this advantage over the alkaline fluidifiers, that, while it fluidifies the fibrin, it spares the globules.

The *Iodide of Potassium*, M. Dorvault thinks, has none of the defects, and embodies all the excellencies of iodine. He believes that it is in this form that it exists in the marine plants and animals in which it is found." The system, having once given admission to the iodide, discharges it with remarkable rapidity and completeness. Scharlau, of Stettin, recovered daily from the urine 345 of the 350 centigrammes administered. Kramer found that, after employing it for fifty days, six suffered from its elimination. Marchal (de Calvi) found it in the urine in from twenty-five to sixty minutes, after only a grain had been given. Of 15 grains, 0·883 parts were recovered from the urine in thirty-six hours, leaving only 0·117 to be accounted for."

NEW PREPARATION OF THE PHOSPHATE OF IRON.

At a late meeting of the Medical Society of London, Dr. Routh exhibited two specimens—one solid, the other fluid—of phosphate of iron dissolved in metabasic phosphoric acid in a boiling state, and allowed to cool. The solution was of a semi-transparent, greenish, or slaty hue. If exposed to the air for a day, it hardened ; but could be made at once into pills by being mixed with liquorice powder or flour. The compound was soluble in any proportion of water, and free from any nauseous inky taste. It appeared better adapted than any other preparations of iron for cases of anæmia and debility brought on by venereal or other excesses, over-study, and other depressing diseases in which there was a prevalence of nervous symptoms, and a large quantity of phosphates voided by the urine. It did not gripe or constipate. The dose was gr. i or ij three times a day. [Abridged from *Medical Times*, Jan. 25, 1851.]

THE HOSPITALS OF LONDON. No. III.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

BETHLEM HOSPITAL.

PHYSICIANS. Dr. Monro ; Sir A. Morison.
SURGEON. W. Lawrence, Esq.
RESIDENT MEDICAL OFFICER. Dr. W. Wood.

THIS ancient institution (one of the first, if not the oldest, asylum for lunatics in Europe) was founded in 1247, during the reign of Henry III, by Simon Fitzmary, a sheriff of London, at Bishopsgate, when it was designated the Priory of Bethlehem. At the dissolution of the religious houses, the property was seized by Henry VIII, who in 1547 granted the Priory, with all its revenues, to the Corporation of London ; from which time, it was appropriated as a hospital for the cure of lunatics. Owing to the limited income the institution possessed, the usefulness of this charity was necessarily circumscribed, until the year 1675 ; when, by the liberality of benevolent individuals, a splendid building was erected in Moorfields for the reception of 152 insane patients. Tradition reports that the design was taken from the Tuileries ; which so incensed the "grande monarque", Louis XIV, when he heard his regal château had been made the model of a madhouse in London, that he ordered a plan of St. James's palace to be taken for offices of the meanest nature. Over the gates of the old hospital, constructed in Moorfields, the two celebrated statues were placed of Melancholy and Raving Madness, sculptured by Caius Gabriel Cibber, the father of Colley Cibber the comedian ; these are still seen in the vestibule of the modern structure in St. George's Fields, Lambeth.

Notwithstanding the addition of wings to the original building in Moorfields, it was found inadequate to the increasing claims made for admission within its walls ; hence, in 1812, the first stone of the present edifice was laid, to contain 198 lunatics. In August 1815, the new hospital, being completed, was opened for the reception of patients ; nevertheless, like the old institution in the city of London, it was soon found inadequate for the wants of an increasing population. The charity having now, however, ample funds at their disposal, the governors resolved to build additional dormitories for 166 inmates ; these were accordingly commenced in July 1838, and finished about two years afterwards. Although the accommodation, afforded in the new hospital, was thus made considerably greater than previously, two other wings, chiefly for convalescent patients, were added in 1845 ; whereby, also, a better classification of the lunatics could be accomplished. Along with these additions, the central dome, which now towers above all the neighbouring buildings, was erected, to serve as a chapel for patients and residents.

In consequence of the various additions thus made to Bethlem Hospital, the institution is capable of accommodating 450 inmates ; although the average number of patients, usually under treatment, seldom exceeds 400, including the criminal and the incurable lunatics.

The medical staff of the hospital consists of two physicians, viz., Dr. Monro and Sir Alexander Morison ; one surgeon, Mr. Lawrence ; and a resident medical officer, Dr. Wood, who alone resides on the premises. Consequently, during twenty-two out of the twenty-four hours of every day, on that gentleman rests the responsibility of superintending the medical treatment ordered by his superior officers, for so large a population ; as there are neither house-

surgeons nor resident pupils, as in many foreign lunatic asylums, or even some English establishments.

Bethlem is a hospital for the cure of mental diseases, not an asylum for lunatics. Although a limited number of incurable insane patients now reside within its walls, in consequence of a valuable estate in Lincolnshire having been left for the express purpose of maintaining incurable and dangerous lunatics, a large proportion of the patients under treatment are recent cases, whose mental malady has not been of long continuance; and no lunatic is admitted who has continued more than one year insane. In consequence of this regulation, the annual number of admissions is generally considerable: and the character of the maladies, affecting the patients under treatment, is more acute, and often exhibits very different types of disease from those usually manifested by the inmates of county lunatic asylums.

During the year 1850, the number of curable lunatic patients admitted into Bethlem Hospital, was 344, of whom 135 were males, and 209 females; thus giving a preponderance of 74 in the latter sex, or 54 per hundred. The number of patients discharged cured during the same period, amounted to 197, consisting of 74 men and 123 women; being at the rate of 57 per cent. of cures, which forms a high ratio, and is considerably beyond the amount discharged convalescent in previous years. Amongst the curable patients, the number of deaths was 31, which exceeded the usual average. This arose chiefly from the circumstance, that last year many individuals were received into the house almost in a dying state, through motives of charity. Much relief was thus given to the relatives and families of the afflicted sufferers, as well as comfort to the patients themselves. Besides the 31 deaths now enumerated, four incurable and six criminal lunatics died in 1850; so that forty-one is the total number of fatal cases during the past year.

Speaking generally, 13 of the total deaths were classified as the immediate consequence of disease of the head and nervous system, three of which arose from general paralysis. This fact deserves notice, seeing that the malady is considered of less frequent occurrence in England than on the continent; especially if London be compared with Paris. Sixteen patients died from affections of the thoracic organs; of whom six were carried off by phthisis, and three by that rare form of disease,—except amongst the insane,—gangrene of the lungs. Respecting this unusual morbid change of structure in the respiratory organs, it may be interesting to mention, that the three instances all occurred in male patients; and as two had been only four weeks in the hospital, the other about eight months, the mental disease, consequently, had not likely been of long standing; whilst neither of the patients were old men, one being 45, another 41, and the third in his thirtieth year. *Exhaustion* is reported as the cause of death in nine cases. This expression is too indefinite; and might, we think, be generally superseded by more precise phraseology in a hospital report regarding disease amongst lunatics.

Another interesting feature connected with the insane patients admitted during the last year into Bethlem Hospital, is *the apparent cause which produced mental disease.* This constitutes an important subject of investigation in all complaints, but especially in those of the mind; and as minute inquiries are always made respecting the above point, when patients enter this institution, much curious and instructive information is often obtained.

As it would be incompatible with the present brief sketch of Bethlem Hospital, to enumerate every particular cause producing insanity in the three hundred and forty-four patients admitted during the year 1850, a short summary, with a few illustrations, will suffice to show the chief influences which appeared to produce the attacks of mental alienation. Speaking generally, one half of the cases, in both sexes, were ascertained to have arisen from moral causes. Anxiety appearing the most frequent influence;

twenty-six women and twenty-two men being so classed. Grief at the death of friends was reported to have produced insanity in eighteen females, but in only two men. Love caused madness in twelve females; but not a single instance occurred amongst the male patients; whilst religion was assigned as the apparent cause of mental disease in eight women and in six men. Various other moral agents might be also enumerated, which, however instructive, would be tedious to particularise; nevertheless, one or two curious examples of the powerful effect often produced upon weak human minds by transitory influences may be mentioned, as they show how easily the mental faculties are disordered, and sometimes even completely upset, by temporary impressions, doubtless strongly acting at the time upon the nervous system, and a susceptible constitution. Thus, two men became mad from the fear of being attacked by cholera, and one from political excitement. Two women, on the other hand, were deprived of reason from living with insane persons; one from attending a singing-class; another female lost her senses from terror at the revolutionary disturbances in Paris; whilst a fifth became insane from the excitement of travelling, for the first time, by a railway.

Amongst the physical causes producing insanity, intemperance was reported as the most frequent, especially in men, nine cases having been met with in that sex, while eight occurred amongst the female patients, although the latter were more numerous. Bodily illness produced madness in thirteen women, but only five instances occurred amongst the male inmates. Eight cases of puerperal insanity were admitted, and three arose from lactation; four from change of life; two from uterine disturbance; and one female was reported to have gone mad from her recent marriage. Again, amongst the male patients, four were stated to have become lunatics from solitary sexual excess; three from exposure to a hot sun; one from the disappearance of an accustomed eruption; another in consequence of an attack of cholera; whilst one poor fellow became insane from severe sea-sickness. Lastly, amongst the whole 135 male lunatics admitted, 39 cases were ascertained to have hereditary tendency to insanity, which makes about 29 per cent.; whereas, amongst the 209 female patients, 67 exhibited hereditary tendency to mania, being at the rate of 32 per cent. on the admissions; thus proving that mental diseases, besides being more frequent in women, are likewise transmitted to the offspring in a higher proportion amongst them than in the opposite sex.

In addition to the above summary of the chief causes which apparently produced mental alienation in the various individuals admitted into Bethlem Hospital, it may be interesting to mention, especially as the frequently severe character of the cases is thereby manifested, that more than half the male patients, or 76 of the 135 admitted, were classed as violent cases, most being likewise dangerous either to others or themselves. Farther, amongst the 209 female lunatics also admitted during 1850, nearly one-half, or 100, were enumerated in the same category, of whom 90 were decidedly dangerous lunatics. It is also worthy of special notice, that 58, or nearly one-half of the male patients received, were classed as suicidal; of whom 14 had actually endeavoured to destroy themselves previous to their admission. Again, amongst the 209 female lunatics, almost one half, or 103, were ascertained to be suicidal patients, of whom 28 had attempted suicide prior to becoming inmates of this establishment.

The above interesting facts are now briefly mentioned, not only to shew the forms of mental disease generally met with in the curable wards of Bethlem Hospital, but also to prove, that unlike most public receptacles for lunatics, particularly county asylums, this institution is, in great part, appropriated for the reception of recent cases of insanity, and therefore constitutes a hospital for the cure of insane patients, rather than a refuge for

the hopeless victims of that terrible calamity. Hence, those who have remained more than one year within its walls, without receiving benefit, are then discharged as uncured, in order to be replaced by others more recently attacked with insanity. Although relatives may be sometimes inconvenienced by having their afflicted friends thus sent home before they are convalescent, and with perhaps slighter hopes of improvement than existed previous to admission, it ought to be always remembered that, during one year at least, and occasionally even for fifteen or eighteen months, such patients have been maintained and treated gratuitously; and although they no longer receive the benefits of this charity, other fellow-creatures equally, or even more severely afflicted, then occupy the recently evacuated dormitories. By this arrangement, a larger number of lunatics are annually received, than could be otherwise admitted; and in this way the utility of the institution becomes more extensively diffused. As every English county now has, or ought to possess, an asylum for the reception of its lunatic poor, the regulations in force at Bethlem Hospital render its benefits more generally useful, notwithstanding instances may occasionally occur, where a rigid adherence to the spirit of the rules may prove inconvenient to individuals.

Bethlem, being an hospital appropriated chiefly for recent cases of insanity, whilst the criminal and incurable lunatic patients also supply numerous illustrations of chronic and protracted instances of mental disease, supplies an excellent field for the study and investigation of mania in every variety. Until recently, medical students could no where else in the metropolis obtain clinical instruction and practical knowledge respecting the treatment of insanity, except at this hospital. But even here, owing to the very high fee charged for permission to attend the physicians, and as only three pupils could be entered at the same period, the doors of the institution became almost wholly shut to the general body of the profession; so that few students, excepting those specially intending to treat mental diseases, were induced to avail themselves of the means of instruction here afforded to them.

About nine years ago, Dr. Webster, then a governor of the hospital, brought the subject of allowing medical pupils greater facilities, when attending in the wards of the institution, before the managing authorities. Considerable discussion ensued upon his proposition, which it now seems wholly unnecessary to detail. Nevertheless, the agitation, thus commenced, ended ultimately in throwing open the portals of this large charity to all medical students who might feel anxious to obtain knowledge respecting the treatment of insanity, and to witness the practice of the physicians; the admission fee for each term—extending to about four months—being reduced to three guineas; whilst, in the summer season, clinical lectures are given by one of the medical officers. During last year, Dr. Monro lectured to the pupils, of whom generally about ten attended very regularly. In the ensuing summer term, Sir A. Morison will probably undertake that duty, as he did during 1849. Hence, no professional person can complain that he is unable to learn the nature, symptoms, treatment, and pathology of mania; for not only Bethlem Hospital, but St. Luke's, and the Hanwell Asylum, are now accessible to properly qualified applicants.

Notwithstanding these facilities for studying insanity, the numbers likely to take advantage of the ample opportunities at present available, will not, probably, be numerous, until the licensing medical corporations require from all aspirants for their honours, practical proofs that they are conversant with diseases of the mind as well as of the body. Formerly, it was sometimes said to be useless to insist on candidates for diplomas from the Colleges possessing any knowledge of mental diseases, as no place was open for obtaining such

knowledge. Now, others even assert it to be unnecessary to enter hospitals for the insane, as the Colleges do not examine on insanity, and there is plenty to learn besides. Such reasoning may be agreeable to the inactive student; but it only shews the necessity which exists of medical colleges, and public bodies, altering their system, especially in reference to medical officers entering the army and the East India service. Indeed, a rumour prevails, that an intention exists of requiring from the future surgeons appointed to the Honourable Company, a certificate of having attended at a public lunatic institution, where they have had proper opportunities of acquiring an adequate knowledge of the management of mental diseases. This would be a very judicious proceeding; and however necessary for those filling military medical appointments, it is still more essential for civil practitioners; especially as they are liable, at any time, to be called upon to attend cases of madness, and sometimes on an emergency; which duty they should be as much qualified to undertake, as to treat any severe attack of fever, an accident, or accouchement. Besides this, if both legally and medically conversant with the subject of insanity, the physician or surgeon would be then fully prepared to enter courts of justice, when called as a witness in cases *de lunatico inquirendo*. He would then be able both to speak confidently, as well as scientifically, respecting the symptoms and condition of the individual under investigation, instead of being sometimes brow-beaten by astute barristers, who even consider it a great triumph if they can invalidate the evidence of "doctors", by making them give obscure answers to difficult questions, and so puzzle the court and jury through mystifications. This an experienced practitioner ought to be fully qualified to clear up or explain, with credit to himself, and with advantage to the afflicted lunatic.

Elaborate and varied statistical data are annually prepared, containing many instructive particulars respecting the curable patients under treatment, during the year. These tables were commenced, in their present form, in 1843, by Dr. Webster, who arranged the plan adopted, and compiled the different returns for that and the succeeding year, when they were printed for the use of the governors, along with the Report of the General Committee of Management. Exactly parallel statements have been drawn up regularly ever since they were commenced, more recently by the resident medical officer, Dr. Wood, and these are now distributed to the governors along with the Physicians' Annual Report. As it would be tedious to enumerate the different subjects embraced in these official documents—amounting to thirty-five in number,—the reader need be only now informed, that they contain, amongst other particulars, the condition of the inmates admitted, their former occupations, the assigned causes of their disease, and whether dangerous, violent, or suicidal patients. The symptoms and treatment, also the apparent cause of death, the numbers discharged uncured, or sent home convalescent, are carefully recorded. The influence which age, season of the year, duration of the attack previous to admission, the patients' domestic condition, degree of education, nativity, and religious persuasion, have exercised upon the disease, are likewise registered; besides other data of much value to the student and medical practitioner. As these tables have now been continued, on the same model, for eight consecutive years, and already form a large collection of important information, they will every day become of greater value to psychologists.

UNIVERSITY COLLEGE HOSPITAL.

The following is the Medical Staff of University College Hospital.

Physicians. Dr. W. H. Walshe, *elected* 1849 ; Dr. Parkes, *elected* 1849 ; Dr. Garrod, *elected* 1850.

Assistant-Physicians. Dr. Jenner, *elected* 1849 ; Dr. Hare, *elected* 1850.

Obstetric Physician. Dr. Murphy, *elected* 1842.

Surgeons. R. Quain, Esq., *elected* 1842 ; John Erichsen, Esq., *elected* 1850.

Assistant-Surgeons. John Marshall, Esq., *elected* 1848 ; W. Cadge, Esq., *elected* 1850.

Consulting Ophthalmic Surgeon. R. Quain, Esq., *elected* 1850.

Ophthalmic Surgeon. T. Wharton Jones, Esq., *elected* 1850.

Dental Surgeon. Durancé George, Esq., *elected* 1844.

Apothecary. J. T. Clover, Esq., *elected* 1848.

The Obstetric Department, which is presided over by Dr. Murphy, is devoted to the superintendence and care of Pregnant Women until they are delivered ; to the treatment of Diseases of the Womb and its appendages ; and to the Diseases of Children.

Three days in the week—Monday, Wednesday, and Friday—are set apart for the purpose of giving letters for attendance to pregnant women. Their names, residences, ages, etc. are entered according to the following formula.

No.	Date.	Name	Age.	Residence.	Health.	Catamenia.			No. of Children.	Miscarriages.	Letter sent to	General observations.
						Age at first appearance.	Interval.	Last appearance.				
1	Dec. 27	A. B.	25	15, Warren-st.	Good	15	Four weeks.	April 22	6	2	Mr. L.	

To the woman is then given a letter, directed to the gentleman who is appointed to attend to her. If he is willing to do so, he gives the patient one-half of the sheet for her guidance, and keeps the other ; if not, the letter is brought back to be directed to another. When the woman is delivered, another formula is filled up, and returned to be entered on the register.

No.	Date of delivery.	Duration of labour.	Placenta expelled.	Child.					Mother.	Attended by.	Duration of pregnancy.	Remarks.
				Position.	Sex.	Living.	Dead.	Putrid.				
1	Jan. 27	10 hours	10 min.	1st V.	M.	1	0	0	1	Mr. L.	280 days	

By this means, with other more usual particulars, an important collection of facts in reference to the duration of pregnancy may be obtained. The interval between the last appearances of the menses and the delivery of the patient is always accurately noted, when the information can be accurately obtained. The women are all attended at their own houses : they receive medicines for a fortnight after delivery. The number of patients who received letters during the year 1850 was 788.

Two obstetric assistants are appointed for periods of six months. The senior aids Dr. Murphy in the treatment of diseases of the womb, both in the out and in the in-patients. He also assists, when called upon, in cases of difficult labour. The junior assistant is chiefly engaged with the midwifery cases. He is first called upon in any difficulty in delivery, when, if necessary, he sends for the senior assistant, or for Dr. Murphy. He assists in keeping the register of midwifery patients, and in the performance of any minor operations that may be necessary.

Patients afflicted with diseases of the womb, of whom there are about 300 in the year, are attended as out or as in-patients ; the latter occupying a ward in the hospital devoted to these complaints. The out-patients attend on Tuesdays, Thursdays, and Saturdays. Thursday is the day for the private examination of uterine diseases. A large proportion, at least 70 per cent., are cases of chronic inflammation in one form or another. Their frequency is nearly in the following order : 1. Inflammation and ulceration of the os and cervix uteri (about 60). 2. Inflammation of the ovaries, generally the left (about 30). 3. Inflammation of the body of the womb, accompanied by highly hysterical symptoms (10). Each of these forms may merge into the other, but they generally observe the above order ; inflammation of the neck extending to the ovary and body of the womb, and inflammation of the ovary to the body : but the reverse, extension of the inflammation of the body of the uterus or of the ovary to the os and cervix uteri, has not been observed ; though there is no reason why this should not happen. The speculum is used in all cases of inflammation and ulceration of the os and cervix uteri. The local remedies employed are chiefly nitrate of silver, and sometimes potassa fusa.

Inflammation of the ovaries is generally detected by pressing the inguinal space with the fingers of opposite hands, one being passed into the vagina, the other behind the linea ilio-pectinea. These patients are generally sterile. The proportion of prostitutes has not been ascertained ; but ovarian inflammation seems by no means confined to them.

Of other diseases, displacements of the womb are next in frequency. Prolapsus is the most common ; then retroversion or retroflexion, anteversion, and sometimes anteflexion. In the diagnosis of these affections, Dr. Simpson's sound is used, except when pregnancy is suspected. In the treatment, Dr. Murphy sometimes uses no instrument, contenting himself with replacing the uterus by the hand. In other instances (of retroversion) he passes a gum-elastic ring-pessary back to the *cul-de-sac* of the vagina, so that, when the sound is withdrawn, the womb cannot fall so far back as before. The uterine supporter is seldom used, having been found to cause inflammation.

Next in order of frequency are fibrous tumours, with a few cases of polypus, carcinoma, and, very rarely, corroding ulcer and cauliflower excrescence.

Disordered menstruation is so frequently only a symptom of other diseases, that it is difficult to separate it. For instance, dysmenorrhœa is the constant symptom of stricture of the cervix uteri, caused by a spasmodic contraction of the fibres between it and the body of the uterus. This is generally the result of chronic inflammation, but sometimes it is congenital. It is relieved on the same principle as stricture of the urethra, by dilatation with metallic bougies.

Venereal cases in the mother are sent to the surgeon. Copper blotches, and other venereal eruptions, are often met with about the nates and testes of infants.

The diseases of children are chiefly those of the skin, scrofula, and chronic disorders, the result of innutrition. The acute diseases, inflammation and fever, are less numerous, and the patients only attend at the commencement of the attack, as they require the aid of a dispensary, where the child may be attended at home. The number of these is about 200 in the year.

NORTH LONDON EYE INFIRMARY.

Consulting Surgeon. John Dalrymple, Esq.
Physician. Dr. Twining.
Surgeons. White Cooper, Esq.; G. D. Pollock, Esq.; John Pyle, Esq.; H. B. Norman, Esq.
Apothecary. Mr. Burcham.

An interesting example of sudden recovery of sight, after an operation for cataract, occurred recently in a patient of Mr. White Cooper. An elderly female, of rheumatic constitution, had undergone three operations for solution; but, as a hard nucleus still obstructed the pupil, she had no sight. It was intended to depress this nucleus, but accident rendered such a step unnecessary; for, whilst doing some household work, the woman felt an acute pain shoot through the eye and head, and instantly saw. The obstructing body had fallen down behind the iris, leaving the pupil clear. For ten days all objects appeared tinged with blue; but, by quiet and some treatment, this symptom of retinal irritation passed away, and she now sees well. In 1849, Mr. Cooper saw a somewhat similar case. A cataract had been extracted from the eye of a surgeon, and, in passing through the pupil, it had left a small portion of transparent soft circumference behind; the section healed kindly, but the soft matter becoming opaque, blocked up the pupil. The sight being thus very imperfect, he slipped when sitting down, about three weeks after the operation, and fell backwards, striking his head with force against a door. For a minute he was stunned; but, on recovering, was agreeably surprised at the clearness with which objects appeared. As in the former case, the obstructing fragments had been displaced, leaving the pupil clear. Mr. Cooper has now under his care a good example of strabismus convergens, caused by an ulcer on the cornea. A little girl, six years of age, had a small inflamed ulcer on the lower half of the left cornea. When first seen, and for a week subsequently, the eye was perfectly straight, but the ulcer became exceedingly sensitive, and the eye turned in to avoid the friction of the lid on the abraded surface. A drop of castor oil was directed to be placed between the lids, and the usual treatment was adopted; but although the ulcer has been healed for some weeks, the squint remains. Had the ulcer been in the centre of the cornea, the strabismus might have arisen from the natural effort to overcome the obstruction to vision; but it is below the margin of the pupil, and consequently the sight is not interfered with.

There have been an unusual number of rheumatic and catarrhal inflammations this winter, frequently accompanied with ulceration. Bark and soda, with or without colchicum, and mild local stimulants, were the most efficacious measures.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 28, 1851.

Samuel Solly, Esq., Vice-President, in the Chair.

Case in which the Cæsarean Section was performed; with Remarks on the Peculiar Sources of Danger attendant on the Operation. By Charles West, M.D. The patient was a young woman, aged 27, a patient of Mr. Wren of Brownlow Street, whose health had always been indifferent, but whose person was not apparently deformed, and who reached the end of her first pregnancy without manifesting any symptoms especially calling attention to the state of her osseous system, with the exception of pains of a rheumatic character, and difficulty in walking, which last became very great during the last two months of her pregnancy. When labour came on, at the end of the full period, the existence of extreme pelvic deformity was at once ascertained by Mr. Wren, in whose opinion, as well as in that of Dr. West, Dr. Murphy, and Dr. Ramsbotham, the performance of the Cæsarean section was indicated. It was accordingly performed by Mr. Skey, fourteen hours after the commencement of labour, and eight hours after the rupture of the membranes; uterine action having been feeble from the first, and having almost ceased since the escape of the liquor amnii. The patient was, by her own desire, subjected to the influence of chloroform before the operation was begun: no difficulty was experienced in its performance, and a living female child was extracted. Very formidable hæmorrhage followed the removal of the placenta; and the subsequent contractions of the uterus were very tardy. The patient was left in a state of great exhaustion, from which she never rallied, and died in 108½ hours after operation, apparently from the conjoint effects of the hæmorrhage during the operation, and of the shock to the nervous system. The treatment consisted in the administration of stimulants and nourishment, both by the mouth and in enemata, and the patient was kept almost throughout under the influence of opium. The body, on examination after death, presented no evidence of serous inflammation; but the uterine wound was gaping widely, and even that of the abdominal parietes was but partially closed. The pelvis presented, in a most marked degree, all the characteristics of that deformity which is produced by mollities ossium; the pubic bones being projected into a beak 1·2 inch in length, the width of the pubic arch being reduced to ·6 of an inch, and the distance between the tuberosities of the ischia to 1·2 inch.

Dr. West then proceeded to point out the causes of the high rate of mortality among the mothers in cases of Cæsarean section, which in hospitals abroad was 79 per cent., and in this country 85·4 or 87·5 per cent. The causes were referred to four heads, and illustrated by reference to 134 fatal cases, in which the body was examined after death. The four heads were as follows: 1. Hæmorrhage; which proceeds from a source different to that whence bleeding takes place in any other operation, and which is not capable of being arrested by the same means as suppress it under ordinary circumstances. 2. The shock inflicted on the nervous system, as well by the violent interference with the most important process that ever goes on in the organism in the same limited time, as by the injury to a part so important, and so richly supplied with nerves, as the uterus of a parturient woman. 3. The hazard inseparable from extensive injury to the peritoneum, when unblunted in its sympathies, and unaltered in its texture, as it is in cases of ovarian and other tumours, for the removal of which a similar exposure of the abdominal cavity is sometimes practised. 4. The infliction of a wound

on the uterus, at a time when, in the ordinary course of things, the processes which nature is prepared to carry on in it consist in the disintegration and removal of the tissue—processes the very reverse to those essential to the repair of injury. The author concluded that, these sources of danger being so serious, and so beyond the power of art to prevent, the rule which forbids the performance of the Cæsarean section, wherever there is a reasonable probability of accomplishing delivery by the natural passages, is founded on solid grounds, and ought to be adhered to.

Tuesday, February 11, 1851.

Dr. Addison, President, in the Chair.

Case of Cæsarean Section. By Henry Oldham, M.D. The subject of this case was a rickety, deformed girl, aged 23, unmarried, pregnant with her first child, and seven months gone in gestation when first seen by Dr. Oldham. On examination, the pelvis was found to be reduced to two inches in its conjugate diameter, and the uterus was much anteverted. The membranes were punctured for the induction of premature labour, in a few days after she was seen, September 23rd, 1850. On the following morning, the left arm was found in the vagina, but labour did not come on until nine A.M. on the 26th. In twelve hours, the os uteri was dilated, and then some attempts to deliver her were made. The child could not be turned; but, by drawing down the protruding arm, which, from commencing decomposition, soon gave way, and pressing the abdomen from below, the head was brought over the brim, and was at once perforated. For four hours, the crochet was employed, both inside and outside the head, the bones of which were completely torn up, but without drawing it through the brim. At this time, a new impediment was found to have arisen, from the descent of the right hand and a foot, by the side of the collapsed head, into the pelvic brim; and, on watching the effect of labour pains, all these parts were felt to be squeezed together in the narrow inlet of the pelvis, each preventing the other's descent. It was attempted to bring down either the foot or hand; but only the slippery tips of each could be touched, and they could not be moved. The patient had now been seventeen hours in labour, and it became a question for serious consideration and consultation, whether she would be able to sustain the necessary efforts for her delivery, and whether it would not be for her benefit to perform the Cæsarean section before exhaustion came on, which at length was determined on. The operation was performed by Mr. Poland, without difficulty, and with little hæmorrhage, the patient being under the influence of chloroform. The incision, five inches long, was slightly curved, and a full-sized seven months' fœtus was removed, and afterwards the placenta and membranes. For two days the patient did well; but then exhaustion came on, and she died. While she lived, she was kept under the influence of opium, and was sustained by simple cold drinks. On post-mortem examination, there were some slight traces of peritonitis near the uterus. The external opening was closed, and its edges adherent, but the uterine incision was gaping. The larger omentum was indurated and inflamed, and so drawn across the uterus, above the incision, as to prevent any discharge from the latter organ escaping into the peritoneal cavity.

Two practical questions were suggested by this case. 1st. What was the best plan to attempt to follow out in the delivery at first? 2nd. Were the complications such as to justify the Cæsarean section? With respect to the first question, one of two plans of treatment might have been adopted: 1. To induce labour, and deliver by craniotomy; 2. To allow her to go to term, and then perform the Cæsarean section. In determining in favour of the former, the author was guided by the great probability—with a conjugate diameter of two inches—of being able to deliver with the crotchet, and he considered that his inability to do so arose from the complex presentation. With reference to the

second, he was induced to have recourse to the Cæsarean section, from a conviction that the patient would probably sink under the prolonged efforts at delivery; and a case was related which occurred in the Lying-in Charity at Guy's, under Dr. Ashwell, where a woman with a far less contracted pelvis died undelivered, after the powerful and sustained efforts to relieve her. It was remarked that the girl had but a feeble constitution, which would ill support so hard a trial of its powers; and the condition of the vagina was particularly noticed as retaining the marks of early age, being structurally weak and easily lacerable, and most unfavourable for a long craniotomy operation. Under these circumstances the Cæsarean section offered a speedy and sure, instead of a prolonged and doubtful delivery. It was not yet forbidden from exhaustion, or any signs of inflammation; on the score of suffering it contrasted most favourably with persistence in the use of the crotchet; and, upon the whole, it was judged to offer a better chance of ultimate success. The curve in the incision was suggested to catch the outline of the muscular fibres on the inner surface of the uterus, and so favour the closure of the wound. The scanty hæmorrhage during the operation was in a measure accounted for by the uterus being at the seventh instead of the ninth month, by the placenta being attached to the posterior wall, and the uterus being opened low down towards the cervix, where the veins were less developed. Chloroform was said to be a gain in every way, and the after-treatment by opium appeared satisfactory.

[The personal tone of the discussion makes it difficult to give with fairness to all parties a condensed account; and for that reason we are forced to omit it.]

MEDICAL SOCIETY OF LONDON.

December 28, 1850,

J. Risdon Bennett, M.D., President, in the Chair.

Physiological Properties of Picrotoxine. By R. Mortimer Glover, M.D. The author commenced by detailing seven experiments, the animals experimented on being dogs, a she-ass, a pigeon, a frog, a rabbit, and a gold fish. The results in each experiment, and the *post-mortem* appearances, were alike, namely, retrograde movements, shown in a slight degree by convulsive twitches of the eye, head, neck, and shoulders backwards, and in an extreme degree by a regular forced retrogression, salivation, and general tremors, bloody stools, laborious breathing, rapid action of the heart, and opisthotonos. The autopsies revealed total extinction of the muscular irritability, with great heat of the muscular fibres, the thermometer rising to 115 degrees; irritability of heart, more so of the auricles than of the ventricles, both cavities being distended with black fluid blood; the lungs slightly congested; the stomach and intestines showing marks of irritation; great congestion of the brain and its membranes, especially the lower portions, the cerebellum, corpora quadrigemina, and upper part of the spinal cord, with much bloody serum in the ventricles. The dose of picrotoxine given to the dogs varied from one to two scruples; to the ass, 100 grains; to the pigeon, 4 grains; to the frog, 5 grains; and to the rabbit, 10 grains; 5 grains were placed in the water containing the gold fish, but the picrotoxine is very insoluble in water. In all these experiments it was either given by the mouth, or inserted under the skin of the axilla or groin. The author next proceeded to compare the results of his experiments with those made by M. Flourens in the removal of various parts of the brain, especially in the corpora quadrigemina and cerebellum. The resemblance, he remarked, was very striking. To prove this, a quotation was made from Cuvier's report to the Institute on Flourens' experiments, and the following conclusions were drawn by the author as the legitimate deductions from the results

of his experiments: 1. Picrotoxine has the power of determining peculiar movements and effects very similar to those described by M. Flourens as resulting from sections of the cerebellum, and perhaps of the corpora quadrigemina. He did not think, however, that the animals in his experiments were blind until just before death, if then, as in the cases where Flourens cut away the corpora quadrigemina. The iris was certainly in some cases contractile, until the symptoms became very severe, when the pupil was enormously dilated. 2. Picrotoxine also acts powerfully on the spinal cord, and generally is a narcotico-acrid poison. 3. It is not, for one of these active principles, so very energetic, that is to say, in such small doses, like conia, aconitina, etc., although a most terrible poison. 4. The animal temperature was much increased in some of these experiments, forming, in this respect, a great contrast with some facts Dr. G. observed several years ago, showing the great diminution of temperature undergone by animals slowly poisoned by the chloride and bromide of olefiant gas, chloroform, bromoform, etc. How far the increase of temperature was owing to the excitement of the nervous system, he (Dr. G.) would not decide. The peculiar movements caused by picrotoxine, Dr. Glover thought, were neither reflex nor voluntary, but should be considered a third kind of motion.

January 4, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Case of Internal Strangulation. By Henry Hancock, Esq. [Mr. Hancock's case is contained in his article, published at p. 244 of the present number of this Journal.]

January 11, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Inhalation of various Medicinal Substances. By John Snow, M.D. [Dr. Snow's paper appears as an original article at p. 122 of this volume.]

January 18, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

On the Assimilative Force in relation to Hypertrophy and Atrophy. By Alexander Henry, M.D. The following is the summary of the author's remarks on hypertrophy. 1. In all cases of hypertrophy, we have to consider the assimilative force of the tissues as the essential element. 2. In certain instances, this force seems sufficiently intense to appropriate a steadily supplied increase of blood, without being heightened by any stimulus. 3. In several tissues in the higher animals, and in man, hypertrophy takes place only under the stimulus of functional exercise; and an excessive supply of blood will not produce hypertrophy, unless the assimilative power of the part be thus stimulated. In atrophy, the assimilative force was considered to be sometimes impaired from want of exercise, and sometimes from being exhausted by over-exertion. Defect of it was also considered by Dr. Henry, (following in a great measure the views of Dr. Hodgkin), to be an important pathological element in fever.

January 25, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Treatment of Permanent Stricture of the Urethia. By Robert Wade, Esq. Nothing very new was contained in the paper; and nothing remarkable was elicited by the discussion.

February 1, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Use and Abuse of the Speculum. By R. Greenhalgh, Esq. The author had examined a thousand women with the speculum within three years. In

a fifth of that number he had found red granulating surfaces, varying in size from a small pea to half-a-crown; and in some instances they bled when touched. In two cases, in each of which the cervix uteri was enlarged, puffy, and somewhat tender to the touch, in part covered with a large, red, and apparently granulating surface, the os uteri admitted the top of the finger; to both the potassa fusa was applied, and was followed by peritonitis: the patients ultimately recovered Mr. Greenhalgh considered that he had used the speculum far too often, and that in reality it ought rarely to be employed. In most cases of uterine sores he preferred vaginal injections to cauterisations; and in all he thought the cure was chiefly to be obtained by constitutional remedies, such as steel with ammonia, the mineral acids, the shower bath, and hot and cold hip baths.

Dr. Crisp recollected the opposition which followed the introduction of the stethoscope, upon the ground of indelicacy. The objection was valid against both instruments when they were abused, but both were employed with advantage in proper cases.

Dr. H. Bennet thought that the frequency with which Mr. G. had used the speculum was not justifiable. At the Western Dispensary, with which he had been connected, the cases in which the symptoms justified the use of the speculum were, in about three years, only 300; being in the proportion of about 120 in the 4000 or 5000 women who annually presented themselves for treatment at that institution. The potassa would of course do mischief when misapplied; it cured chronic cases by substituting acute for chronic inflammation.

Dr. Murphy expressed regret at the unfair spirit in which the speculum controversy had lately been carried on. He agreed with Dr. Bennet in thinking that the speculum ought only to be used when a very strong probability existed that there was uterine disease requiring its employment. Evidence of this could generally be obtained; and the indiscriminate investigations of Mr. Greenhalgh were not to be commended. "Ulceration of the cervix", about which so much had been said, Dr. M. defined to be "a florid, red, circumscribed granular spot, such as is found in the conjunctiva or the throat. The surface is but little raised, on account of the delicacy of the membrane, and paucity of cellular tissue; but its elevation is more and more marked as the disease advances." The neck of the uterus becomes indurated, and increased in volume, causing general disturbance of the health, which cannot be fully met without local treatment. Constitutional measures should be applied at the same time.

Mr. Greenhalgh stated, in reply to the above and various other speeches addressed to the Society, that he had used the speculum so extensively only for the purpose of testing its value, and testing the truth of the statements which had been made regarding the frequency of ulceration of the cervix uteri. He had not made it a matter of gain; having, with half-a-dozen exceptions, used it only on gratuitous patients.

February 8, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

On Gonorrhæa. By John Chippendale, Esq.

February 15, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Anatomy of the Urethra. Mr. Hancock made the following communication:—Assisted by Mr. Hogg, he had examined, microscopically, the structures surrounding the urethra. He found that the urethra itself was not muscular, but closely invested by organic muscular fibres continuous with the muscular coat of the bladder, which consisted of two layers, an internal and an external. The external passes forwards, and extends over the outside of the prostate gland; the internal, on the contrary, accom-

panies the mucous lining through the prostrate, forming an involuntary muscular covering to the urethra in its passage through the gland. The membranous portion of the urethra is next closely invested by these muscular fibres, which cannot be mistaken for any portion of Wilson's, Guthrie's, or Santorini's muscles, the latter being voluntary, and presenting the usual striated appearance under the microscope, whilst the former are involuntary and nucleated. Continued forwards, they reach the bulb, where they divide, the one part being continued onwards to the orifice of the urethra, lying between it and the corpus spongiosum, whilst the other passes on the outer surface of the corpus spongiosum, separating it from its fibrous investment, to which the fibres adhere pretty closely. These latter are also continued forward to the orifice of the urethra, and, in their course, invest the spongy portion of the bulb, urethra, and glans penis, entering very largely into the formation of that peculiar structure found at the orifice of the urethra, and which appears to consist almost entirely of involuntary muscle and elastic cellular tissue, forming an additional sphincter muscle to those usually described as met with in various parts of the body. It will thus be seen that the corpus spongiosum urethræ lies between two layers of involuntary muscle, the one separating it from the urethra, the other from its fibrous covering ; an arrangement, doubtless, exerting considerable influence over the expulsion of the blood from the corpus spongiosum when erection of the organ is no longer required, as well as over the emission of urine and the seminal fluid. After the meeting, Mr. Hancock exhibited, under the microscope, specimens of the muscular tissue just described.

Morale and Medicine in Connexion with Phthisis. By Theophilus Thompson, M.D. [This paper will appear as an original article in this volume.]

MISCELLANEOUS INTELLIGENCE.

Convalescent Hospital at Carshalton. The Carshalton Hospital, near London, was founded six or eight years ago, by Dr. Forbes and benevolent persons, for the purpose of affording to the sick poor, and to those especially who had been discharged from the London hospitals, a temporary asylum, where they might have the advantages of good pure air, wholesome food, and a properly regulated regimen, before they returned to their laborious trades, and were again exposed to the injurious influences which surround the homes of the London artizans.

The rules of the establishment are very simple. A subscriber's letter entitles a patient to the benefits of the hospital, provided he be declared a fit subject by the London committee. A selection is necessarily obliged to be made, as the hospital is of limited size, and its funds are at present small. If the patient be eligible, he is then sent to Carshalton free of expense, and is kept there for one month. Medical attendance is provided ; but the chief remedial measures relied upon are exercise in the pure air, a good diet, and the regular habits enforced in the hospital. The improvement in the health of the London workman is sometimes almost incredible : we have frequently heard individuals who had returned from Carshalton speak of it and of the benefit they received there, in terms of the deepest gratitude.

The advantages of such an institution as this are obvious. Our London hospitals are generally obliged to leave their work half done. The acute disease may be cured, the broken bone united, or the operation-wound neatly healed ; but beyond this the case is left very much to itself. A patient cannot be kept in hospital till his constitution has thoroughly rallied from the shock, and till the nutritive functions are again performed with perfect regu-

larity and vigour. He is obliged to be sent forth, too often to return at once to a miserable and filthy den, and at once to endure, with an exhausted frame, the fatigues of, it may be, an unhealthy occupation. No wonder is it, that in this way the unfortunate artizan often sinks into a state of permanent ill-health ; and when he is next admitted to the hospital, it is with an incurable disease.

No blame attaches to the medical officers of our London hospitals for this premature discharge of patients ; it is impossible to retain convalescent persons in the wards when numberless applicants are clamouring for their turn. The hospital has done its part of the work, and probably done it well ; but something else is wanted to confirm and ratify this work, and to secure it from the chance of its having been done in vain. The idea of a Convalescent Hospital, a few miles from London, to which such patients can be sent, was an obvious one. It has been well worked out on a small scale at Carshalton, and, as we have already intimated, the results have been most satisfactory.

It is now proposed to extend the application and the benefits of this institution. A new hospital is in course of erection, on a piece of ground generously given to the governors by Lord Ellesmere, and the number of patients will be considerably increased. To do this, however, funds are wanted ; and it is with a view of entreating our professional brethren not to remain inactive when a scheme of such obvious utility is impeded for want of money, that we have now brought before them the nature and circumstances of this hospital.

It would be a most desirable thing to bring this Convalescent Asylum into connexion with the great London hospitals. Bartholomew's, or Guy's, or University College, should *own*, as it were, a certain number of beds, which should be kept occupied with such convalescent patients as were deemed likely to be most benefited by country air and country regimen. A small subscription from each hospital would nearly support the Carshalton Asylum, which would then become *ex officio* and completely, what it is now only partially and incidentally, a great sanitary depôt, in which the cures begun elsewhere might be perfected, and secured from relapse. Bartholomew's and Guy's would not diminish the actual good effected in their wards, if they devoted some part of their enormous incomes to providing for their convalescent patients the most effectual means for making permanent the good which has been effected. [From *Medical Times*, February 22, 1851.]

The First-year Student upon his arrival in London. "Where shall he live ? What shall he do ? Who will become his friends and future companions ?

"The moral position of the student, during the session that is now about to open, must needs be a subject of painful anxiety to those parents who know well that the time has arrived when it is fitting and necessary that even their favourite son shall face the temptations, and begin to take his share in the great business of the world. What will then be his conduct ? Will it reflect honour on them, and be creditable to himself ?—or will some evil genius throw its malignant influence around him, and seduce him from the paths of rectitude into those of idleness and dissipation, where he will squander his means, revel in vice and folly, and bring gray hairs with sorrow to the grave ? Will he escape, uncontaminated, the snares which notoriously lie in wait for the youthful traveller when he has left his parental hearth, and is wandering through the highways and bye-ways—the broad streets and narrow alleys—of a great and over-peopled city, in which wealth and poverty, luxury and starvation, virtue and vice, seem huddled together in striking and revolting contrast ? How will he return to the home of his fathers ?

"These are questions of deep and solemn import, which at this moment make the life-blood quiver in many a mother's heart. It behoves us now,

therefore, to view the student's life under its moral aspect. And, first, his place of residence should be judiciously chosen. There cannot be a question that the best policy will be to board in a respectable private family,—if possible, in the house of a physician or surgeon, who will superintend his studies, and whose society will always be instructive, and bear upon the great object he has in contemplation. Lodgings, the best of them, are dreary solitudes, which the brightest fire on a winter's night will hardly cheer up into anything like domestic comfort. 'I am never domesticated', said Robert Southey, 'in lodgings; the hearth is unhallowed; the Penates do not abide there.' The student, with all his home associations fresh about him, feels this, and soon leaves his solitary fire-side to enjoy the gaieties of the theatre, the licentiousness of the tavern, or the society of new acquaintances, with whom he is tempted to smoke cigars, drink punch, and tell merry stories—'pleasant, but wrong'—until the hour arrives when Hamlet's ghost, in the shape of a policeman in blue armour, 'sniffs the morning air,' and meeting him in the deserted street, perhaps 'marshals him the way that he should go.' Habits of irregularity and intemperance are hereby engendered, which are incompatible with study, and which never would occur or be tolerated in a private family. But however important for his personal comfort the place of his abode may be, the choice of his new companions is of infinitely greater consequence to his future happiness, for this is the initiatory step which will govern for good or for evil all his future movements. The purest stream may become contaminated by running through poisoned ores. Vicious habits are more contagious than the leprosy of old, and disfigure the mind, more than that Eastern plague ever did the body. Once infected, there is no escape. Beware, therefore, of new acquaintances. The lustre of a young man's honour soon becomes tarnished in an impure atmosphere. Use caution and discretion in the selection of your friends, and cultivate an intimacy only with those who are of studious and temperate habits, and who can, directly or indirectly, in conversation suggest new ideas, or impart information. For the mind, even in its hours of recreation, should be as active as the swallow on its wing. There are many young men who exhibit no apparent or outward vices, whose society, nevertheless, it would be well to avoid. Such are the following:—We would avoid those who are gay, thoughtless, and prodigal, who lavish their money foolishly away, and whose lodging-house cupboards are miniature wine stores and gin palaces. We would avoid fashionably-dressed youths, who profess to understand and be fond of horses and dogs, and the mysteries of the race-course and the ring, and who leave the hospital for the livery-stable, to associate with grooms, pugilists, horse-breakers, and dog-fanciers. We would avoid those who delight in billiard-playing, whist, écarté, and games of chance, their proficiency in which has been purchased at the expense of their professional education. We would avoid men who habitually haunt the theatre and the tavern, who 'vex the drowsy ear of night' with their uproarious mirth, and go forth to their class-room next morning with faces pale, and cadaverous, and suffused with the fumes of the previous night's debauch. We have, too, a prejudice against any young man whom we may meet with moustache on his lip, and 'imperial' on his chin, elbowing his way along the street with a student's cap upon his head, and a cigar reeking in his mouth. Their cigar is the symbol of the tap-room and the wine-cellar. We would avoid associating with men who are much richer than ourselves, for we could not prudently compete with them in their expenses, and it should always be our pride never to be ashamed of an honourable poverty. We would, also, for our own peace of mind, avoid over-talkative men—everlasting chatterers—the magpies of debating-societies. We know many such, but they have no health in them. What says the immortal Shakespeare? 'Let not the creaking of shoes, or the rustling of silks, betray thy poor heart to woman;

keep thy foot out of brothels, thy hand out of plackets,[1] thy pen from lenders' books, and defy the foul fiend.' " [Dr. S. BUSHNAN's *Address to Medical Students*. London: October 1850.]

ROYAL MEDICAL SOCIETY OF EDINBURGH. The annual dinner of this important Society, now in the 114th year of its existence, took place in the Archer's Hall, Edinburgh, on February 20. In addition to a large attendance of ordinary members, there were present the Presidents of the Royal Colleges of Physicians and Surgeons, several of the Medical Professors of the University, besides other distinguished members of the Profession in Edinburgh. Among others, were Professors Christison, Syme, Balfour, and Hughes Bennett; Drs. John Conolly of Hanwell, Dr. R. M. Glover of Newcastle, Dr. Adams of Banchory, Mr. J. F. Macfarlan, the Treasurer of the Society, and Mr. A. Gifford, law-agent. Mr. Wolley, as Senior President, occupied the chair; and Dr. Alexander Christison (son of Professor Christison), Mr. Sanderson, and Mr. Murchison, officiated as *croupiers*. After the usual loyal toasts, the Chairman proposed "Prosperity to the Medical Society." He referred to the benefits which the Society, from the earliest period of its history to the present time, had conferred on the medical profession. Many of the great men, who had been educated in the Edinburgh Medical School, had owed more of their advantages to the important training which its debates afforded, than even to their more regular academical studies. Mr. Wolley, in further alluding to the project just now before the Society, of removing to a more commodious and more advantageously placed hall than the one which it at present occupied, expressed his confidence that the past and present usefulness of the Society would prove the guarantee of its future prosperity; and that although it had often, and with some truth, been called an ancient Society, yet, so far as its prospects were concerned, it had only just completed the period of its youth, and was now entering on its maturity. Mr. Sanderson next proposed, "The University of Edinburgh and the Professors." Dr. Christison, in replying, expressed the pleasure which he felt in conveying to the Society the assurance of lasting interest which the Professors felt in its welfare, and their willingness to cooperate in its objects. "The prosperity of the Royal College of Physicians, and the health of Dr. Simpson," were next proposed by Dr. Alexander Christison. Dr. Simpson replied, expressing his sense of the great benefits which he himself personally had received from the Society in the early part of his career. He concluded by proposing the health of the "Senior President." Professor Christison next proposed the health of Dr. Conolly; after which, Dr. Conolly having responded, various other toasts were given, and the Society separated at a late hour, much gratified with the whole proceedings of the evening.

EPIDEMIOLOGY *v.* PATHOLOGY. Epidemiology is in the ascendant! At the commencement of this session, the Pathological Society offered to pay rent to the Royal Medical and Chirurgical Society for permission to meet in their rooms in Berners-street; but the Council declined the proposal. This, it now appears, arose from no feeling of dignity on the part of the executive, as subsequently they granted the gratuitous use of their apartments to a semi-scientific association—the Epidemiological Society. We are not able to explain the conduct of the Council; but *it requires explanation*, more particularly if it be true, as the *Medical Times* alleges, that an "upholsterer and chair-maker" has been proposed as a member of the new Society which has been so hospitably housed by the rulers of the Royal Medical and Chirurgical.

THE FOTHERGILLIAN GOLD MEDAL of the Medical Society of London, for the best essay on Phthisis, has been awarded to DR. RICHARD PAYNE COTTON, Assistant-Physician to the Hospital for Consumption, Brompton.

[1] "Plackets," an old word signifying *petticoats*.

APPOINTMENTS.

James, W. W., Esq., elected Surgeon to the Exeter Dispensary, in the room of W. P. Kingdon, Esq., resigned.

Parsey, Dr. W. H., late Assistant Medical Officer of the Devon County Lunatic Asylum, to be Medical Superintendent to the Warwick County Asylum.

Smith, Andrew, M.D., Deputy Inspector-General of Hospitals, elected Inspector-General of Hospitals, and Superintendent to the Army Medical Department, in the room of Sir James McGrigor, resigned.

St. Mary's Hospital, Paddington. The following gentlemen have been selected:—Physicians—Drs. Alderson, Chambers, and Sibson. Surgeons—Messrs. Coulson, Lane, and Ure. Physician-Accoucheur—Dr. Tyler Smith. Surgeon-Accoucheur—Mr. I. B. Brown. Ophthalmic Surgeon—Mr. White Cooper. Aural Surgeon, Mr. Toynbee.

OBITUARY.

Audubon, M. J. J., the distinguished naturalist, at his residence near New York, aged 76, on 27th January.

Fletcher, Dr. Ralph, late Consulting Surgeon to the Gloucester General Hospital, at his residence in Gloucester, aged 70, on 8th February.

Langenbeck, M., Professor of Surgery at Göttingen, aged 75, lately.

Mackness, Dr. James, at Hastings, aged 46, on 8th February.

Naegele, Dr., Professor of Midwifery at Heidelberg, aged 72, lately.

Thorpe, R., Esq., Consulting Surgeon to the Royal Infirmary at Manchester, aged 64, on 21st January.

TO CORRESPONDENTS.

To the Editor of the London Journal of Medicine.

24th February, 1851.

Sir,—In a "Paper on Continued Fever", by Dr. Humphry Sandwith, published in the London Journal of Medicine for the present month, is the following passage: "On the other hand, Dr. William Jenner himself admits, that occasionally, though very rarely, in typhoid fever with the rose rash, the follicular lesion is wanting". So far as I am aware, during four years' daily attendance at the London Fever Hospital, I saw not a single exception to the rule, that rose spots are diagnostic of typhoid fever, that is to say, of an affection having for its anatomical character disease of Peyer's patches, and that the mulberry rash is diagnostic of typhus fever; I mean just as far diagnostic of those diseases as are the eruptions of measles, and of scarlet fever diagnostic of those two diseases. I may add, that the experience of 1850 fully bore out the law I attempted to establish in vol. xxxiii of the *Medico-Chirurgical Transactions*, that the poison of typhoid fever, of typhus, and of relapsing fever, respectively produce only disease identical in essential characters with that from which the poison generating the new disease itself sprung. By inserting this in your ably conducted Journal, you will oblige,

Yours obediently, W. Jenner.

8, *Albany-street, Regent's Park.*

St. Thomas's Hospital. From the length of the account of this hospital, we have been obliged to postpone it to next month.

Our Cotemporaries, when they quote original articles from our pages, ought to name the Journal to which they are indebted. Dr. R. Quain's paper on the Stethometer (wood-cuts included) was transferred to the *Lancet* and *Medical Gazette*, but there was no reference to the London Journal of Medicine. By another species of inadvertence, our youthful brother the *Institute* reprints one of Dr. C. J. B. Williams's papers on the Physical Examination of the Abdomen, stating that it is from the *Dublin Journal of Medicine!*

Foreign Editors and Authors are requested to deposit copies of their works with M. Victor Masson of Paris, or with any of the booksellers in Germany in correspondence with Messrs. Williams and Norgate, of Henrietta Street, Covent Garden, London. In all cases they ought to be addressed, distinctly, "To the Editors of the London Journal of Medicine, Richards' Printing Office, 37, Great Queen Street, Lincoln's Inn Fields, London."

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ORIGINAL COMMUNICATIONS.

ACCOUNT OF A CASE OF SPONTANEOUS COLLAPSE OF THE ANTRUM.

By W. WHITE COOPER, Esq., F.R.C.S.; Senior Surgeon to the North London Eye Infirmary, and to the Artillery Company; Ophthalmic Surgeon to St. Mary's Hospital.

(Read before the Medical Society of London, March 1, 1851.*)*

THERE are few gentlemen engaged in the practice of our profession, who do not, once at least during their lives, meet with cases of so anomalous a character as to set at defiance all the recognised rules of science and of art. We are in the habit of terming such cases *unique;* but it would probably be more correct to regard them as examples of disease occurring only at rare intervals, and then forgotten. Notwithstanding the vast accumulations of published observations which bear testimony to the diligence and pains-taking industry of our predecessors, they can hold but an insignificant relation to the mass of knowledge which has been lost through not being placed on record. Sir Benjamin Brodie has well remarked, in one of his Introductory Discourses, that "the best part of every man's knowledge is that which he has acquired for himself, and which he can only to a limited extent communicate to others. You will spend your lives in endeavouring to add to your stores of information; you will from day to day obtain a clearer and deeper insight into the phenomena of disease; you will die at last, and three-fourths of your knowledge will die with you; and then others will run the same course. Our sciences are indeed progressive; but how much more rapid would their progress be, if all the knowledge that experience gives could be preserved."[1]

I have been led to these reflections, by the signal failure which has attended my endeavours to obtain information from published authorities on the case I am about to relate.

CASE. On the 22nd March, 1849, I was consulted by Margaret Ryan, aged 25, a strongly-built young Irish woman, who complained of a flow of tears over the cheek. Her appearance was remarkable; there was a deep depression of a purplish hue between the side of the nose and the malar bone of the left side, precisely as if a portion of the superior

[1] BRODIE, Sir B. C. Introductory Discourse, 1843.

maxillary bone had been removed. It was bounded superiorly by the inferior margin of the orbit, which partook of the depression; inferiorly by the base of the alveolar process; externally by the malar process of the superior maxillary bone and the malar bone, and mesially by the nose. The distance from the bridge of the nose to the deepest part of the depression was one inch and four tenths, or nearly one inch and a half; on the right side, the admeasurement between corresponding points was barely an inch. The angle of the mouth on the affected side was slightly directed upwards, which became more marked when she smiled. There was slight *stillicidium lachrymarum*.

History. Until seven years previously, her face had been perfectly symmetrical; but about that time she first perceived a dusky mark beneath the left eye, unattended with pain or weakness of the organ. This dusky appearance gradually extended down the face by the side of the nose, and, after a time, some flattening of the cheek became apparent. Gradually and almost imperceptibly this increased, still without any sort of pain or uneasiness, until the face had assumed the form described; but it was not until a week before I saw her that there were symptoms of discomfort in the eye and cheek, when she felt shooting pains, and was teased by the watering of the eye.

On examining her mouth, the teeth of the left side were found *in situ*, but greatly decayed, and the gums were in an unhealthy state. There was not, however, any alteration in form, either of the alveolar process or the hard palate, neither was there any obstruction in the corresponding nostril, though the patient thought it rather drier than the other. The finger recognised a deep depression in the situation of the antrum, but there was no indication either of loss of substance or destruction of bone; the cheek seemed simply to have sunk.

Thinking it possible that the decayed teeth might have something to do with these changes, I recommended extraction of the cuspid and bicuspid. This was kindly done by Mr. Alfred Canton, but not without considerable difficulty, and the fangs presented that rough appearance so indicative of periostitis. Mild astringents were prescribed for the eye, and soon after I lost sight of the patient for a time.

On the 6th June, 1850, she again applied to me, on account of the stillicidium lachrymarum, which had recommenced. No alteration in the cheek was apparent, with the exception perhaps of a somewhat darker hue of the integuments. She stated, that with trifling exceptions, she had been free from pain, and that the trickling of the tears had only returned quite recently; it subsided in a fortnight under mild astringents.

She again called upon me on the 4th of last February. A decided increase of the depression was now visible; the whole anterior wall of the maxillary sinus seemed to have sunk, causing considerable deformity. The depth of the depression continued the same, but the superficies was greater; the integuments were rather more adherent to the bone, giving a puckered appearance to the cheek; the nostril was free and unaltered in form, but thinner and less firm than the opposite, as if slightly atrophied; the alveolar process retained its figure. She informed me that she had enjoyed the best of health during the past twelve months, and had nothing to complain of, except an occasional weeping of the eye. Her present condition is that above-described.

REMARKS. Until the middle of the seventeenth century, when the maxillary sinus was first fully described by our countryman, Nathaniel Highmore,[1] little was known of this osseous cavity, and less of the diseases to which it is subject. Since that time, however, able writers and good observers have not been wanting, and Bordenave,[2] Runge,[3] Jourdain,[4] Desault,[5] Deschamps,[6] Weinhold,[7] and Gensoul,[8] have left on record much

[1] Nathaniel Highmore died March 1684, aged 71.

[2] BORDENAVE, M. Précis d'Observations sur les Maladies du Sinus Maxillaire. Mem. de l'Acad. Roy. de Chir., tom. xii and xiii.

[3] RUNGE, I. H. De Morbis præcipuis Sinuum Ossis Frontis et Maxillæ Superioris, etc., 1750. Haller, Disp. Chir., tom. i.

[4] JOURDAIN. Traité des Dépots dans le Sinus Maxillaire, etc., 1760. Also, Traité des Maladies de la Bouche.

[5] DESAULT. Remarques et Observations sur les Maladies du Sinus Maxillaire. Œuvres Chirur. par Bichat.

[6] DESCHAMPS, J. L., fils. Traité des Maladies des Fosses Nazales et de leur Sinus. 1804.

[7] WEINHOLD, C. A. Ideen über die abnormen Metamorphosen des Highmorshöle. 1810. Von den Krankheiten der Gesichtsknochen und ihrer Schleimhäute. 1818.

[8] GENSOUL. Lettre Chirurgicale sur quelques maladies graves du Sinus Maxillaire, etc. 1833.

valuable information on the subject of diseases of the antrum; I have not, however, succeeded in finding in the works of those authors, or elsewhere, a satisfactory description of the affection under which my patient labours. The only observation, indeed, directly bearing on the point, with which I am acquainted, is in Otto's *Compendium of Pathological Anatomy*.[1] "The maxillary sinus," says he, "is either entirely wanting, or very small, according to the imperfect development of the bones; still, however, although these are perfect, the cavities may be much diminished, or even entirely destroyed by great contraction of the bones." And in a note he adds: "I at least have seen it in several cases."

It is far from easy to trace or to offer a satisfactory explanation of the changes which have taken place in the case under consideration; they partake perhaps most of the character of atrophy, as if some check had been given to the due nutrition of the parts, or to the deposition of new matter, in place of that removed in the ordinary course of life. Though the effects produced by the irritation of decayed teeth are usually the very opposite to that here presented to our notice, yet the distinct evidence of irritation borne by the diseased condition of the teeth extracted must not be lost sight of, and, in the absence of any more definite exciting cause, may possibly have originated the peculiar morbid action which has been set up; but that such an amount of alteration should have taken place without pain, and with such trifling inconvenience, is truly remarkable. It must be distinctly borne in mind that there was no sinking in of the alveolar process; *that* stood out in bold relief in consequence of the depression above, so that the diminution of the cheek was quite independent of any contraction arising from loss of teeth.

The patient was seen by Mr. Fergusson on the 28th of March, 1849, and he favoured me with the following note.

"My dear Sir,—This is a curious case; I never saw one like it. I am disposed to think that contraction of the antrum is going on, and that the anterior wall is drawing inwards so as to cause the alteration in the symmetry of the face. I cannot suggest anything.

"Yours very faithfully, Wm. Fergusson."

Mr. Stanley and Mr. Edwin Saunders have also been kind enough to make a very careful examination of the woman's face; and the former gentleman stated to me, that neither in the numerous museums which he had inspected, nor in the course of his very extensive researches with reference to diseases of bones, had he met with a similar case.

[Postscript. During the discussion which followed the reading of this paper, it was suggested by Mr. Edwin Canton, that the condition of the face might have resulted from the development of a tumour from the floor of the antrum, adherent to the anterior wall; the growth of this being arrested, and a curative process set up, it would, as it shrank, draw the anterior wall after it. Mr. Chippendale thought it might have arisen from the outlet of the antrum having been so stopped as to render the cavity air-tight, so that the pressure of the external atmosphere caused collapse of the bones. Mr. Pilcher mentioned instances in which he had seen appearances similar to those described follow a congenital want of symmetry, and also a case of a vascular tumour, which springing from the antrum, had caused absorption of the anterior wall, and when compressed, gave rise to the appearance of a depression in the cheek. Lastly, it was suggested, that some disease may have attacked the superior maxillary nerve, or certain of its branches, and that the atrophied condition of the parts was the result.]

19, Berkeley Square, March 1851.

[1] Otto, A. W. A Compendium of Human and Comparative Pathological Anatomy. Translated by J. F. South. 1831.

A PRACTICAL ANALYSIS OF SEVENTY CASES OF INFLAMMATORY, FUNCTIONAL, AND STRUCTURAL DISEASE OF THE HEART.

By S. SCOTT ALISON, M.D., Licentiate of the Royal College of Physicians of London.

The examples of Heart-disease of which I propose, in this communication, to give some account, are divisible into inflammatory, functional, and organic. The line has been drawn as correctly as the nature of the subject, and the difficulty of always forming an accurate diagnosis, would permit. Examples of disease may have been regarded as simply functional, which may have comprised some organic lesion; and, on the other hand, cases may have appeared to involve rather more organic change than was really present. Nevertheless, I am confident that, on the whole, the return is reasonably correct. Every exertion was made to ascertain the facts of each case, which have been faithfully recorded. Structural disease is, for the most part, the result of inflammatory or of functional disease; and it is difficult to say exactly where the one ceases, and the other commences. In making a division, I have preferred being directed rather by prominent and well marked features, than by very minute observation or elaborate reasoning.

The total number of cases of heart-disease, of which this paper treats, is seventy. Of these, three were inflammatory; twenty-five were functional; forty-two were structural.

I. INFLAMMATORY DISEASES OF THE HEART.

Respecting the cases of inflammation, a few words will suffice. They are only three in number.

Case I. This was a boy, four years of age. The form of disease was advanced pericarditis, with copious sero-purulent effusion in the pericardium, and very abundant woolly-looking deposit of lymph upon the whole exterior surface of the heart. The aortic orifice was somewhat contracted and corrugated. The patient, eleven weeks before, had been attacked with scarlet fever.[1] Anasarca occurred three weeks after. Inflammation of the left lung and pleura had likewise supervened, causing hepatisation and copious effusion into the pleura of sero-purulent fluid. The patient had been an out-door patient at a medical institution up to within a few days of his death; and he came under my care when it was too late to adopt treatment with any hope of a favourable result. This case was published in the *Medical Gazette*.[1]

Case II. This was a boy, six years old. The symptoms led me to believe that a moderate amount of inflammation of the pericardium had taken place. On the fifth day of an attack of scarlet fever, the patient was seized with severe pain in the region of the heart, and

[1] Medical Gazette, February 1845.

with violent palpitation. A small bleeding afforded great relief; and the patient recovered. Pains in the joints and anasarca followed. Recovery took place; but the impulse of the heart was long after observed to be abnormally great.[1]

Case III. A girl, ten years of age, largely made, was seized with acute rheumatism. She had had a similar attack about a year before; for which I treated her, but without venesection. The heart did not become implicated. On this occasion, she did not apply to me for several days after the commencement of the attack; and she had not been seen above once by a medical attendant. On my first examination, the "to and fro" rubbing sound was distinctly heard, and a loud sawing systolic sound, strongest at the apex of the heart, was readily perceived. Under local bleeding, the use of mercury, and quietude, the disease subsided, and the rubbing sound died away. The sawing sound was heard unimpaired while she remained under treatment, which she did for some months; and the heart's impulse remained greatly increased at the period of the last examination.

It is somewhat remarkable, and to me it appears worthy of notice here, that these three examples of inflammation of the heart, or of a part of it, comprise, with the exception of one or two doubtful ones, all the instances of that disease which I find recorded in my case-books for the last ten years, among some thousand cases of acute disease, including many examples of acute rheumatism. Minor and more insidious attacks may doubtless have escaped my observation, and have grown with time into greater importance, after having passed from under my inspection. It is a matter of uncertainty with me, whether I should refer one very interesting case of disease of the heart in an infant (to be related at a later period) to inflammatory action, or to a rupture or lesion of a valve or valves.

With respect to acute rheumatism, the results of my experience are certainly very encouraging. The example I have selected above is the only one which I have found complicating rheumatism, although my attention was early drawn to the risk of the combination, from having been myself a severe and repeated sufferer from the latter disease in my youth. In the case I have recorded, it is related that the patient was very ill attended to, and that she was in the habit of going out into the open air while suffering rheumatic disease. Under proper care, she had passed through as severe an attack a year before, without any implication whatever of the heart. It is simply to confinement to bed and to a comfortable room, to the avoidance of cold, and to ordinary and reasonable treatment, rather than to the peculiar efficacy of the mode of treatment adopted, that I ascribe this important result. I may, once for all, observe, that the treatment which I have adopted in acute rheumatism, has been, for the most part, the exhibition of alkaline purgatives, and calomel and opium; when the disease has been obstinately located, with pain and swelling and heat, the application of a few leeches; and when the circulation has been persistently and greatly excited, with flushed face, head-ache, and full strong pulse, in the young and middle-aged, the abstraction of a few ounces of blood from the arm. Few things, in the treatment of rheumatism, appear

[1] Medical Gazette, February 1845.

to me to be more conducive to immunity from cardiac complication, than strict and constant confinement to bed. So important do I consider this measure, that I always inform my patients that it is a remedial agency, and not merely a mode of rest. It tends, with its hot moist atmosphere, to the object in view, by conducing very effectually to a free action of the cutaneous excretories: it brings the blood, and its noxious contents, to the surface; it derives from internal organs, and when there is a constricted condition of the internal secreting surfaces, as those of the bowels, kidney, and lungs, by a sympathetic influence, it goes far, in many cases, to effect a salutary relaxation. In treating cases of scarlet fever, however mild, I invariably order confinement to bed, with the view of preventing any implication of the kidney, heart, or other organ. Were this practice universally adopted, fewer examples of dropsy and other complications would be observed. This appears, however, so obvious, that were it not that an able systematic writer, of great influence in this country, has stated that confinement to the house is all that is requisite for the more mild form of scarlet fever, the subject would not have been at all dwelt upon.

II. FUNCTIONAL DISEASES OF THE HEART.

It is not my intention to give a detailed account of the cases of functional disease of the heart which have come under my care, but to select for comment some of the more interesting points in their history, and to furnish some statistical results.

The cases of functional disease or disorder which have occurred to me may be divided into two classes: A. Those of increased action; B. Those of defective action.

A. INCREASED ACTION. Cases of this kind have been numerous.

CAUSES. The fifteenth year has been the lowest, and the sixtieth the highest age, at which simple over-action of the heart has been observed. Most patients were between the eighteenth and the thirtieth year. Females suffered more than males, in the proportion of two to one. Season appeared to have little influence in these cases; this differs from what was observed in the case of defective action. Climate was obviously operative in one example. The relaxing climate of India had induced palpitation of the heart in a young lady. Excessive reading for many hours during the day and night induced extraordinary over-action with debility. Anxiety of mind connected with business was the precursor of the attack in several instances. Fear was the exciting cause in one case. An elderly lady was affected with violent palpitation in consequence of apprehension during the late threatenings of the Chartists. Dissipation produced the disease in two instances. A young man "was out for some days" dancing and drinking without interruption. His attack lasted some weeks. A young woman unfortunately addicted to the habitual use of spirits in excess, was the subject of long continued palpitation of the heart, simulating organic disease. Excessive lactation was an exciting cause. A lady, desirous of delaying conception, nursed her child for fifteen months, and thereby induced syncope, followed by obstinate and alarming palpitation of the heart.

Antecedent and concurrent diseases. The nervous constitution was extremely active and sensitive in a large proportion of cases. One young woman was affected with chorea, combined with very partial hæmoptysis. Two patients suffered from hypochondriasis: which in one instance was combined with extreme activity of brain, denoted by rapid speech and rapid change of subject during conversation. Hæmaturia had taken place in two examples; in one the hæmorrhage occurred after a dose of turpentine, in the other under circumstances denoting some temporary disorder of the kidney. Anæmia with venous murmur was found in one example. Aortic murmur was heard in two cases.

Symptoms. These were much the same in all the examples of over-action. There were unusually rapid contractions of the heart, with inordinate beating against the ribs and sternum, shaking the entire thorax. In some cases the contractions of the auricles could be felt by the hand, and a few of the patients mentioned that unusual movements could be felt as high as the third and second ribs; which has led me to believe that in some instances the aorta and pulmonary arteries become the seat of inordinate mobility. A sense of distress was felt in the cardiac region, causing in the mind, at first, a considerable amount of alarm. In almost every case flatus distended the stomach; and in a few, a small quantity passing up into the œsophagus, sometimes by dint of exertion of the patient, was discharged, or, as frequently happened, greatly to the distress of the patient and to the impediment of the heart, it was arrested midway, and held by spasm above and below, and formed a small but tightly distended, and, as it were, solid bag of air. The amount of air generated in the stomach was in the case of some of the patients exceedingly great. One gentleman would for hours, with effort, belch up a large volume of gas every two or three minutes. The stomach and lower part of the œsophagus would thus find relief, but only for a minute, as the gas was immediately replaced by more. So great was the quantity of air thus generated and discharged, that it was somewhat difficult to understand how the contents of the stomach, small in quantity as they were, could produce so much air, even under circumstances the most favourable to fermentation. The over-activity of the heart, perhaps, by monopolising power, and leaving less at the disposal of the digesting organ, and the anxiety of mind, by a depressing influence communicated to the stomach, contributed much to this most distressing symptom. It was the remark of some, that if they could only get rid of the air in the stomach, they would soon be all right. This much has been said on this point, partly with a view to a certain mode of relief to be suggested at a later part of this communication. The pulse was almost without exception feeble, jerking, and small: rapidity was a constant feature. The pulse at the right wrist in one patient became imperceptible, on the assumption of the erect or even the sitting posture; the left was very feeble, yet was to be felt. The horizontal position was necessary, even during violent palpitation, to preserve the patient from an overwhelming sense of faintness. A sense of sinking and faintness was a frequent attendant, and a minor form of trembling seized the patient. Sometimes the face was pallid, and soon after greatly flushed. The

bowels were little affected. The urine, on the other hand, was signally modified. During paroxysms of palpitation, and immediately after, the urine was abundant or excessive, almost colourless, and of very low specific gravity. The gentleman who suffered so much with flatus passed urine showing no appreciable weight above that of pure water, at the rate of 5 oz. in ten minutes, during some hours. It had no taste, but had a slight odour resembling beef tea. It threw down phosphates freely on the addition of liquor ammoniæ. This urine would be succeeded next day by scanty, deep sherry-coloured urine, of high specific gravity, above 1·020. The urine in one example was, as it were, brilliantly illuminated by a profusion of crystals of the triple phosphate.

Physical Signs. These presented little remarkable. The sounds of the heart were short, smart, and loud; the first resembling the French "eu", and the second "up" pronounced hard. The impulse was greatly increased, sometimes succussing the whole or part of the thorax. Over the second rib and corresponding part of the sternum in the case of the gentleman who had suffered hypochondriasis and hæmaturia, a distinct humming sound, synchronous with the systole of the heart, was unequivocally made out, proceeding obviously from the aorta, probably in a state of moderate orgasm. No venous murmur was to be heard in the neck. It is a curious circumstance, and one which reflects light on that just related, that I was enabled to discover the same humming sound in the same parts in the sister of the patient. She too suffered from palpitation of the heart unconnected with organic disease. Her health, never robust, had recently suffered from nursing her infant.

The circumstances which aggravated the disease were exertion, emotion of the mind, full meals, and stimulating drinks. In more than one instance, wine and spirits proved very injurious. Bread in one case caused such an enormous quantity of flatus, as to be very hurtful.

Treatment. The treatment found most efficacious was the removal of exciting causes as much as possible, quietude, and sustaining the strength without causing excitement. Animal food in moderate quantity was found most suitable. When flatus was annoying, this was materially abated by giving the food cold, such as cold jelly, or cold beef tea, with only a small allowance of bread. The medicines most useful in obviating excessive action were hyoscyamus and hops, given alone or conjoined, in tincture or in extract. The bowels, when requiring assistance, were advantageously moved by means of the compound rhubarb pill, with or without a grain or half a grain of camphor. After the disease had subsided, benefit accrued to the general health from the use of vegetable tonics, followed at a later period by chalybeates. Under this treatment, with additions modified to meet the specialities of particular cases, all the patients did well, and none in the end gave any reason to fear the actual commencement of organic alteration.

The horizontal posture was found in more cases than one to make the patient more tolerant of the heart's excessive palpitation, and appeared to favour its subsidence. This posture, however, was sometimes eagerly exchanged for the sitting position during flatulent distress and during efforts to discharge air through the œsophagus. It appears to me that this relief from the horizontal posture was procured by

a reduction of the labour or effort required to be made by the heart, secured by the more ready passage of the blood along a horizontal, than upwards through a vertical tube.

B. Defective action. Several examples of defective action of the heart have come under my notice, but they have presented very few points of interest. The defective action was manifested in weak and fewer contractions of the heart, for the most part accompanied by a greater or less degree of faintness or sinking. The heart's contractions would occasionally cease for a few seconds, causing to the patient a sense of stoppage and fulness at the heart. The sounds of the heart were low but clear. The pulse was of good size, soft, compressible, and often intermittent. Flatus in the stomach, and pallidity of face, were common.

Causes. Fatigue was a very common cause of defective action. Anxiety of mind and sudden emotion have for some moments appeared to suspend the heart's action. Adults only suffered; the sexes in much the same proportion. The heat of summer and autumn caused the attack in several patients. In the summer of 1846, when the heat was very great, some bad cases occurred.

Treatment. Cold ammonia and spirits were found to give relief at first. This was advantageously followed by tonics. Rest from labour was found necessary; and, in some instances, great advantage followed removal into the country, and exposure to the cool breeze, when that could be secured. The horizontal posture was so serviceable, that it was almost involuntarily assumed by the sufferers.

Besides the idiopathic cases of defective action of the heart, I have found in several examples of disease of the brain and medulla spinalis, indicating softening and inaction of these parts, a very decided and very unequivocal debility of the heart. This is somewhat interesting; and I therefore shall proceed to notice one or two examples.

A young married lady consulted me about eight years ago on account of a constant tremor of the eyelids of one eye, and twitching of one angle of the mouth, together with pain at the coccyx on sitting down or on attempting to rise. Rapid and silly talking suggested a weakly brain. The general health was excellent, the face was florid, the body altogether in a state of embonpoint, but the pulse was remarkably feeble and compressible. Disease of the brain and medulla spinalis was suspected. The tremor and twitchings passed off, but reduced sensation soon after occurred, and the patient is now little above the level of an idiot, and can with difficulty stand or creep round a table. The action of the heart is exceedingly feeble; the sounds are low. The pulse ranges about sixty, and is remarkable for want of force.

A gentleman lately called to consult me for dimness of sight and headache. He was drowsy and very fat. The heart's action was remarkably feeble for such a man; and though he was evidently of a full habit, and accustomed to a full meal and little work, I on this account avoided more depletion than I believed necessary to save him from an attack of apoplexy. He improved greatly, but some months afterwards he was seized with a fit, and fell down. A great deal of brandy was

given by the attendant who was called in, and the disease was said to be something of the nature of syncope. Good living was recommended; but the fits have since recurred several times, and they are reported by the attendant in the country to be allied to epilepsy. The patient's mind is weakened, and he is unable to perform the duties of his station.

The same debility of heart's action was remarked at the very commencement of an insidious illness which terminated, some months ago, in the death of the patient in a lunatic asylum. Silence observed to his newly-married wife, and debility, were the first indications of disease. His articulation became slow and faltering. Insanity, approaching idiotcy, was soon after established. The patient was a gentleman of forty years of age, and previously in excellent health. The debility of heart and pulse continued to the last.

III. STRUCTURAL DISEASE OF THE HEART.

Forty-two examples of organic disease of the heart, of which some account is now to be given, include nearly all the cases which have come under my notice for some years. They may therefore be taken as a fair specimen of heart-disease in a physician's practice, and of what the young physician may expect to meet. With only three exceptions, all the sufferers came under my own care. Most of them remained under treatment for some time, and most of the deaths occurred under my own notice. Some of the patients are still living, and under treatment. In these instances, the present age has been given, and the duration of the disease calculated up to this time. In other examples, these points are given at the time of patients coming under treatment. The three patients, not under my treatment, were Nos. 31, 32, and 33, in the general table. No. 33 had been under the care of Dr. Budd, in King's College Hospital. He died in a private house, and I was requested to be present at the examination of the body. The particulars of the patient's symptoms, etc., were taken from the Hospital Book, by the kind permission of Dr. Budd. No. 32 was the patient of a student connected with the Northern Dispensary: I examined the heart and great vessels. The particulars, on other points, are derived from the student. No. 31 was a patient of Dr. Willis, whom I assisted at the autopsy. A considerable proportion of these cases were seen by other physicians, either before or during my attendance.

In the arrangement of my materials, I have, for greater conciseness as well as for more ready comparison, placed many points in a general table. Facts, of little importance in themselves, become of great import in relation to a number of examples of disease. Thus, to know that dissipation and exposure were noted in one fatal case is comparatively of little consequence; but that *all* the patients, of whom this was recorded, ultimately died, is a collective fact of great significance, and is practically suggestive.

Some special points of interest, in different examples, were observed, and are thought worthy of record. These, as well as some observations on the pathology and treatment of organic disease of the heart, require separate notice.

TABLE SHOWING THE AGES OF THE ENTIRE PATIENTS.

Years.	3	9	10	17	18	20	22	25	26	32	34	36	40	43	47
No. Cases.	1	1	2	1	2	2	1	1	3	1	1	2	5	2	1

Years.	49	50	55	57	59	60	61	62	65	72	73	75	80
No. Cases.	2	1	1	1	1	1	2	2	1	1	1	1	1

This proves that organic alteration of the heart is not unfrequently met with in early life. Nine cases occurred at and under twenty years of age. Of the forty-two patients, twenty-two were males, and twenty females.

Of the forty-two cases of organic disease of the heart, seventeen terminated fatally. Of these thirteen were males, and four were females.

TABLE SHOWING AGES AT WHICH DEATH OCCURRED.

Years	17	34	35	36	40	47	49	59	61	62	65	73	75	80
No. Cases.	1	1	1	1	2	1	2	1	1	2	1	1	1	1

Total..... 17

TABLE SHOWING THE CHARACTER OF LIFE OF 42 PATIENTS.

Character of Life.	Exposure.	Exposure and Dissipation.	Dissipation	Violent Exertions.	Viol. Exert. and Dissip.	Dissolue.	Sedentary.	Comfortable.	Destitute.
No. Cases.	8	4	2	6	1	1	1	18	1

Of the eight patients, whose lives were exposed, three suffered simply from hypertrophy; one from hypertrophy with disease of mitral valve; one from hypertrophy, with calcareous deposit in aortic and mitral valves, with great thickening of the endocardium; one from hypertrophy and dilatation; and two simply from dilatation. Three died, and five were relieved. Of the four patients, whose lives were marked by exposure and dissipation, two suffered simply from hypertrophy; one from hypertrophy, and calcareous deposit in the aortic valves; and one from hypertrophy, dilatation, and mitral valve disease. All four died. Of the two patients who come under the head of dissipation, one suffered from dilatation, and soft fatty attenuated condition of heart; the other, from hypertrophy and dilatation. Both died. Of the six patients, whose life had been marked by violent exertions, four died, and two were relieved. Aneurism of the aorta accompanied the disease of the heart in one of the examples. The patient, whose life was one of dissipation and violent exertions, was relieved. The form of his disease was hypertrophy. The dissolute patient suffered from hypertrophy, with steatomatous deposit in aorta etc. He died. The sedentary patient's affection was hypertrophy and dilatation, and it was relieved.

Of the eighteen patients, the chief characteristic of whose life was comfort, fourteen were relieved, and three died; in one case no result is found noted. The destitute patient was relieved.

From these facts it appears, that the most unfavourable circumstances in the mode of life are dissipation, and dissipation conjoined with exposure.

Symptoms. The form of the disease varied so frequently, that it is difficult to give a distinct, and, at the same time, a concise summary of it. Reference to each case is therefore recommended. The same remark and recommendation apply to the physical signs and symptoms.

The pulse, for the most part, fell greatly in force below the force of the heart's impulse. It was almost invariably very weak and intermittent in mitral valve disease. In two examples (Nos. 12 and 14), those of two girls, aged ten and eighteen years, the pulse was regular; and this was probably owing to greater natural vigour at that time of life. The intermittent and irregular pulse has been observed to become regular under unusual excitement of the circulation; and, on the other hand, the nearly regular pulse has become extremely irregular and intermittent under the increased excitement of the heart.

Antecedent Disease. Certain morbid conditions co-existed with, or occurred antecedently to, the accession of disease of the heart, as far as could be ascertained, in thirty-one of the forty-two patients. In respect to eleven, nothing was made out. Seven had suffered from rheumatism on one or more occasions; one from that disease, and distortion of the thorax; five from inflammation in the chest; two from metritis and white-leg following parturition; one from miscarriage, causing great debility; two from distortions of the thorax; one from a contusion of the chest from a kick from a horse; one from gout with deposit; one from scarlet fever; one from colica pictonum; one from laryngismus stridulus; one from fever in India; one from bad health from infancy; one from general weakness; one from gonorrhœa, with hernia humoralis; one from bad development of skeleton; one from bad development and small-pox; one from abscesses in loins; and one from rapid and great distortion of skeleton.

Rheumatism maintains its character as a frequent cause; and the exanthematous diseases exhibit the same relation, though certainly to a much smaller extent. Small-pox and scarlet-fever are found as antecedent diseases, under circumstances suggesting their operation as causes. I believe that rheumatism and some febrile diseases frequently produce disease of the heart from a culpable neglect of moderate precaution. One of the patients came to the Northern Dispensary, suffering from acute rheumatism and pericarditis, with "to and fro sound", and loud internal murmur. A little boy, who died under my care of pericarditis with sero-purulent effusion consequent upon scarlet-fever, had been carried as an out-patient to an hospital till within a few days of his death. Laryngismus stridulus evidently induced the disease in a child when only six months old. Valvular disease was discovered during his convalescence. Palpitation had been remarked occasionally, while the breath was suspended, which it often was for about a minute as completely as if the glottis had been entirely closed by the hand. It was thought at first that the valves of the pulmonary artery had been lacerated by accumulation of blood in the vessel; but the integrity of the patient's respiration, and freedom from blueness, with the extraordinary loudness of the valvular sound at the present time, three years from the

date of his illness, rather refer the lesion to the aortic valves; which probably during the disturbance of the circulation and respiration produced by the fits, which were accompanied, moreover, by severe general convulsions, became the seat of inflammatory action, ending in effusion of lymph, and in permanent alteration of the valves. Distortion of the thorax, cramping the heart and impeding its action, was obviously instrumental in the production of the disease in a few examples. Gymnastic exercises were apparently operative to the same end in the case of a young man. Metritis, with swelled leg, was antecedent in two cases; and it is not unlikely that the inflammation of the veins was propagated to the heart, and resulted in the morbid alteration which there took place. Rapid and very great distortion of the spine and thorax certainly evoked a murmur, if it did not *cause* valvular disease, and probably contributed to the alteration of the walls of the heart. "Inflammation in the chest" was antecedent in some instances; and it is very probable that the heart became implicated in the more general affection, and ultimately led to the morbid alteration observed. In a few examples no cause could be satisfactorily made out. It has often happened, in regard to disease of the heart, as well as in regard to disease generally, that I have failed to obtain an explanation of its occurrence; and it has always appeared to me more likely to advance our knowledge to confess this, than, on slight and fallacious grounds, to adopt this or that as its ascertained cause.

Classification of the Cases. The forty-two cases of organic disease of the heart, which have been tabulated, present many points for comparison, each of which might serve as the basis of classification. But, as this is a practical communication, the point which I have selected as the ground of division of these cases, is one of obvious practical utility, viz., the limitation of the disease to the heart itself, or the implication of other organs, as indicated by the destruction of the general health, the occurrence of dropsy, of reiterated hæmorrhage, or other grave contingencies. This classification will, in fact, be one, first, of twenty cases, confined, as far as has yet been ascertained from their history, to the heart itself; and, secondly, of twenty-two with grave and probably incurable complications of distant organs. Perhaps it would not be inaccurate to say, that while the one group has attained the length of the second stage, the other has proceeded no farther than the first.

In practice, such an arrangement of examples of diseases of the heart, though it boasts nothing whatever of the distinctions of morbid anatomy, and demands no nice power of minute diagnosis, attainable only by long practice, is, nevertheless, calculated to subserve the great end of medical science, perhaps more than any other. It is not my object to disparage the divisions founded on the nature of the morbid alterations, or on the localisation of the disease. Such divisions as those of hypertrophy, of dilatation, and valvular obstruction, are doubtless of vast interest and importance; but they are so much more in a pathological than in a therapeutic point of view.

That the division I have here made is superior, for the direction of the treatment, to that founded on the nature of the morbid alteration, will appear from a reference to the cases. The morbid changes usu-

ally made the grounds of division, are found almost equally in the two groups of cases. Thus we find hypertrophy alike in the very formidable and in the merely local examples. We find valvular disease with abnormal sounds, in several examples of mere local disease, though of long duration, as well as in the cases involving serious complications in other parts of the body.

To know that the heart is enlarged, and that its walls are thickened or attenuated, is doubtless important and interesting; but, if the physician makes this the chief object of his search, and believes that, in diagnosing correctly between thickening and thinning, he has made out the most important facts of the case, he is greatly deceived, and in practice he will assuredly fail to be as useful as he might be. These conditions, in themselves, afford very indifferent guides in practice; and, indeed, are to be found in examples of disease requiring greatly diversified treatment. I believe that, in thus commenting upon this classification, I may be useful to the student and young physician, by inducing them to regard, at least in practice, rather the broad and obvious requirements of disease, as known by its limitation to the heart, or by its distant implications, than the nature or extent of the morbid alteration in the thickness of the heart's walls,—important though that be, particularly in a pathological point of view.

This classification is, like every other, embarrassed with its drawbacks. The case which is to day complicated with hæmorrhage, or, it may be, dropsy, may, ere long, under judicious treatment, be deprived of these adjuncts; and the disease, limited at present to the heart, may ere long involve distant organs. Still, though the arrangement of the case must be changed, we have the guides for treatment.

The presence of *valvular disease* forms a good pathological ground for classification. It is, for the most part, readily detected by the presence of abnormal sounds. Of the forty-two cases, thirteen gave evidence of valvular disease by abnormal bruits. Abnormal sounds were heard in six of the local examples, viz., cases 1, 11, 12, 13, 14, and 16; and in seven of the cases accompanied with complications, viz., cases 22, 23, 26, 31, 33, 35, and 37. But valvular disease is a sign of little value, both in respect of treatment and prognosis. We find it alike in the slightest and the most severe and advanced examples of disease; and the auscultatory signs of its presence are not always to be heard. Valvular sounds, which had at an early period been well made out, would at a later period become altogether, or for a time, inaudible. This probably arose from reduced force of the heart's action no longer being sufficient to propel the blood with sufficient force, and not by any means, as the over-sanguine might conclude, from the removal of the obstructing parts under the influence of treatment. The intensity of the valvular murmur did not always correspond with the amount of disease of the heart, or with the importance of the valvular alteration. The vigour of the heart's action, as well as youth and good general health, seemed to contribute largely to the intensity: the sounds in the limited or local examples were of the loudest. On the other hand, valvular disease, of great importance, connected with very great alteration of the heart, was present in one example, without any murmur having been heard at any time, though diligently sought for.

Any grouping of the cases on the basis of the thickness of the walls

of the heart, will here prove of very little value; the alteration in this particular being much the same in examples requiring very different treatment.

An important division of cases of organic alteration of the heart would be one founded on the healthy firm character, or the disorganized, soft, broken-down alteration of the walls of the heart. But, in practice, it is difficult to diagnose these conditions by physical signs, and we are compelled to have recourse to symptoms, and the general condition of the body. Now, for the most part, the healthy firm heart is found only in the more limited cases, and the disorganized heart is seen only in the complicated examples; so that the division first noticed in this paper will practically be also one of,—first, firm and vigorous structure; and second, of disorganised, soft, inefficient tissue, this being, in my opinion, the most formidable and important alteration, and the prevention and arrest of which is a main indication. So very generally is the heart found firm, or moderately firm, and vigorous, in those examples of disease which still remain free from general breaking up of the health, hæmorrhage, and dropsy, and so commonly is the heart found softened and disorganised in its muscular parts, in those cases marked by these grave contingencies, that I am disposed, in a general way, to regard the first condition as the first stage, and the second condition as the second stage of the same disease; using the word *disease* in a wide and comprehensive sense, and acknowledging it to display manifold varieties, as well as to possess a certain unity of character.

A. Local Cases. The ages of the patients, whose disease was chiefly local, are arranged in the following table in quinquennial periods.

Ages.	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	80
No. of Cases.	1	3	0	4	2	3	1	1	2	0	0	0	1	0	1	1

The average age of the patients is about thirty years. With regard to the sexes, eleven were females, and nine were males. The greater proportion of females, in this list, may possibly be explained on the supposition that the greater care they take of their health, their more protected mode of life, and their greater freedom from hard labour and dissipation, contributed greatly to arrest the development of disease beyond the primarily suffering organ. The duration of the disease varied from two months to twenty years; and as the period could not be accurately determined in some cases, it may have lasted even longer. This shews, that organic disease of the heart may not only permit the patient to survive many years, but that without hæmorrhage, dropsy, or permanent damage to the general health; in short, with very limited suffering. The observations of Dr. C. J. B. Williams (London Journal of Medicine, April and May 1850) and Dr. R. H. Semplé (*Ibid.* November 1850) tend to shew that heart-disease is, in itself, not so incompatible with long life as is often supposed. The interesting cases, recorded by the latter gentleman, prove still more:

they shew that patients may attain old age, with a considerable degree of comfort, even with long-standing apparently formidable valvular disease.

The form of alteration of the walls of the heart, in ten examples, was hypertrophy; in ten, it was hypertrophy combined with dilatation. Of this group of twenty cases, six were marked by abnormal valvular sounds.

The results of these cases were exceedingly satisfactory. Relief was afforded in every case. In some the benefit was great, and promised to be lasting. Death occurred in one example only, that of an octogenarian; and this proceeded more from great and rapid distortion of the body, than from disease of the heart.

B. Complicated Cases. The ages of the patients whose disease extended beyond the primarily affected organ, whose general health was materially injured, and who suffered from dropsy or hæmorrhage, may be classified as under, in quinquennial periods.

Ages.	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75
No. of Cases.	1	0	0	1	6	0	4	1	3	4	0	2

The average age was about fifty years. This is much higher than the average age of the patients suffering only from local disease, viz., thirty years; and is what might have been anticipated, because the progress of years is calculated to convert local into general and complicated disease, and because disease of the heart, at an advanced age, is likely to meet with less resistance than in comparative youth, when the powers of life are yet abundant, and the tissues are firmer, and possessed of more elasticity.

Of the twenty-two patients suffering from hæmorrhage, or dropsy, or both, thirteen were males, and nine were females. Thus males suffered more than females, which is the reverse of what was observed in respect to merely local disease; eleven females, and nine males, making up the number of patients more lightly afflicted.

TABLE SHEWING DURATION OF COMPLICATED CASES.

Duration.	Some Months.	2 Yrs.	3 Yrs.	7 Yrs.	8 Yrs.	20 Yrs.	27 Yrs.	40 Yrs.	Some Years.	Many Years.
No. Cases.	3	1	3	1	1	1	1	1	6	4

The duration of each case, with the exception of a few still under treatment, is given only up to the time when it first came under my notice. Some of the patients lived for some years after. Care was taken to obtain the most correct information on this as on every other point; and it may be regarded, if not as absolutely precise, still as a very near approach to it. With respect to the instances of long duration, viz., twenty, twenty-seven, and forty years, there is no doubt whatever of the accuracy of the information. The patients were all intelligent and trustworthy men. One was the father of a medical friend, not likely to be deceived; and his testimony was corroborated

by examination after death. The gentleman, who had been ill forty years, was a particularly intelligent Scotchman, till within a few months of his death serving with his regiment in the West Indies. He distinctly assured me that he had suffered from disease of the heart for forty years, and that the extraordinary palpitation, which I have endeavoured to describe, was wont to attack him during the whole of that long series of years.

The form of alteration of the walls of the heart, in the twenty-two complicated cases, is seen in the subjoined table.

Alteration.	Hypertrophy.	Dilatation.	Hypert. & Dilat.	Uncertain.
No. Cases.	11	3	7	1

In seven of the twenty-two cases, valvular or abnormal bruits were made out. This is rather more frequent than in the more limited cases; in only six of which were abnormal sounds heard. The results, as might be anticipated, were, in this group of cases, greatly less satisfactory than in the other. Sixteen of the cases terminated fatally: six of the patients were relieved.

Concurrent Diseases. Congestion was the first implication of other organs; and in the examples before us it was, almost without exception, passive. The head was congested in some instances, from the obstructed venous circulation. In only one or two was the congestion at all of an active character, and then it arose more from the agitated condition of the body, and the impurity of the blood, than from any undue violence with which the diseased heart discharged the current of blood. A very anæmic condition of the system did not prevent a patient (No. 36) from suffering much from this complication.

Congestion of the kidney has obviously been instrumental in the production of dropsy. It has destroyed the tone of the organ, and ultimately so injured its vitality as greatly to interfere with its due secretion. This has received much countenance, from the urine becoming more abundant when hæmorrhage has taken place.

Of the forty-two patients, eighteen suffered from head affections, embracing various forms of disease, including active and passive congestion, convulsions, coma, delirium, and headache.

Twenty patients were affected with disease of the lungs and bronchi. Ten suffered from congestion of lungs; one from congestion of bronchi; one from emphysema and black, old tubercles; one from emphysema and chronic bronchitis; two from chronic bronchitis; one from œdema; one from hepatization; one from probable œdema; one from displacement of lung by enlarged liver; one from tubercles and cavities; one from tubercles; one from emphysema, œdema, congestion, and chronic bronchitis.

Of the twenty-two patients, thirteen suffered from hæmorrhage in one form or another. Eight suffered from hæmoptysis, one from hæmoptysis, hæmatemesis and melæna, two from melæna, one from hæmorrhage from bowels, and one from hæmorrhage from bowels and hæmoptysis. In case No. 21, it was remarked that the urine was albuminous until melæna occurred, when the albumen disappeared from the urine; but as soon as the melæna ceased, the urine again became albuminous.

Spontaneous hæmorrhage has afforded great and immediate, if not very lasting benefit to some of the patients. It has done this by relieving congestion, and thus withdrawing one of the obstacles to free secretion. This has been observed even when the blood has been scanty, or highly diluted. Perhaps the benefit from this natural or spontaneous bleeding may not be without a wholesome suggestion to those who, ever eager to adopt every novel doctrine, though opposed to the well tested experience of ages, on all occasions, to the detriment of the sick, and to the injury of a noble calling, repudiate the assistance of the now too much disparaged lancet.

TABLE SHOWING THE RELATIONS OF DROPSY WITH HÆMORRHAGE, ETC.

No. as in general able.	Dropsy.	Hæmorrhage.	Liver.	Kidneys.	Result.
21	Œdema of feet.	Hæmoptysis, hæmatem., melæna.	No disease.	Kidneys only rather small, albuminuria.	Death.
22	Ascites, œdema of feet.	None.	Great hydatid tumour.	No disease.	Death.
23	Ascites, anasarca of legs.	None.	Enlargement.	No disease.	Death.
24	Œdema of feet.	Hæmoptysis.	No disease.	No disease.	Relief.
25	Anasarca of legs.	Melæna.	No disease.	No disease.	Death.
26	Ascites to great extent; anasarca of legs & hands.	None.	Cirrhose.	No disease.	Death.
27	None.	Melæna.	No disease.	No disease.	Relieved.
28	None.	Slight hæmoptysis.	No disease.	No disease.	Relieved.
29	Ascites to great extent, hydrothorax, hydropericardium, œdema of lungs; anasarca of legs.	None.	Cirrhose.	No disease.	Death.
30	Great anas. of legs; œd. of lungs.	Hæmorrhage from bowels.	No disease made out.	No disease made out.	Death.
31	Hydrothorax, ascites, anas. legs.	None.	Cirrhose to great extent.	No disease.	Death.
32	None.	None.	Cirrhose.	Bright's disease in first stage.	Death.
33	Œdema of face.	Hæmoptysis, aneu. of aorta.	No disease.	No disease.	Death.
34	Ascites, œdema of feet.	None.	No disease made out.	No disease.	Relief.
35	Hydrothorax, ascites.	None.	Diseased.	No disease recorded.	Death.
36	Ascites, anasarca general.	From bowels, hæmoptysis.	Great enlargement.	No disease.	Death.
37	Anasarca, great.	None.	No disease.	No disease made out, albuminu. 2 or 3 occasions.	Death.
38	None.	Hæmoptysis.	No disease.	No disease.	Much rel.
39	Hydrothorax, anasarca of legs.	None.	Congestion.	Cyst containing tubercular matt.	Death.
40	None.	Hæmoptysis.	None made out	No disease.	Relieved.
41	Hydrothorax, anasarca of legs.	None.	No disease.	No disease.	Death.
42	Œdema of feet.	None.	No disease.	No disease.	Death.

Dropsy was intimately connected with the soft, flabby, inefficient, disorganised heart. There was reason to believe that dropsy was the effect; but there is ground also to believe that the general effusion of serous fluid into the tissues again materially aided the further progress of the disorganisation of the heart.

Of the twenty-two patients in the second division of the table, seventeen suffered from dropsy in one form or another; three from œdema of the feet;[1] two from œdema of feet and ascites; one from ascites and anasarca of legs; two from anasarca of legs; one from ascites and anasarca of hands and legs; one from anasarca of legs, ascites, hydrothorax, and hydropericardium; one from anasarca of legs, hydrothorax, and ascites; one from œdema of face; one from hydrothorax and ascites; one from ascites and anasarca; one from anasarca; and two from hydrothorax and anasarca of legs.

From the above table it appears that out of seventeen cases in which dropsy occurred, fifteen terminated fatally. In some cases, the amount of dropsy was slight, and the effusion was confined to a part. In others, the amount was great, and different parts formed its seats. In five cases, hydrothorax occurred; in one, hydropericardium. The effusion was confined to the face in the case conjoined with aneurism of the ascending aorta. Ascites took place in eight cases; and it is remarkable that in six of them there was found organic disease of the liver. While this teaches that ascites may be looked for more frequently where there is organic disease of the liver, it also suggests the practical precaution, when ascites occurs, of looking beyond the liver, and of ascertaining the condition of the heart.

Besides the facts given in the tables, there are a few connected with these cases which are too important to be altogether passed over.

One of the first facts of importance which suggests itself to my mind, is the frequency in which I found that disease of the heart had not been made out until a very late period, in some examples only a very short time before death, although there was good ground to believe that the disease had been of considerable duration. In some instances, this has arisen from inattention to obvious evidence; in others, from the absence of some of the more common indications, such as palpitation, pain or oppression, particularly in the region of the heart, or from the impulse and sounds of the heart being in some measure obscured by effusion in the lung or pleura, or by emphysema. In some examples, it is not unlikely that it arose from a current but fallacious idea that there must necessarily be heard, in organic disease, abnormal bruits and marked alteration of the sounds of the heart; and that when these are not made out, symptoms alone, such as palpitation, blue face, dyspnœa, dilated veins, etc., are to go for little or nothing. One gentleman (No. 39 in the general table) had the sounds and impulse of heart so masked by emphysema and œdema of the lungs, together with much flatus in the stomach, that his disease, great as it was, was not made out by two of the oldest physicians in town, who had attended within a short time of his death. The feeling of the patient in respect to the stomach being the chief seat of disorder, may

[1] One case of slight recent œdema of the feet in a patient aged 80, remains in the first table.

likewise be operative in leading to this error. A patient (No. 37 in the general table) spoke so confidently of his disease being merely "wind in the stomach", that I felt it my duty to inform him that it was much more serious; but he apparently treated my information on this point as unworthy of consideration.

The anæmic venous murmur in the neck, which had been distinctly heard in case No. 36, before the jugular veins became greatly dilated, and the seat of regurgitation, on the occurrence of these conditions was no longer heard, although the blood continued fully as much diluted. This cessation was probably due to the subtraction of one of the necessary conditions for the production of the sound; viz., a certain amount of rapidity of current.

Diagnosis. The diagnosis in advanced organic disease is, for the most part, sufficiently easy; though, as we have seen, even great alteration may be marked by emphysema, œdema, or flatus. A careful examination of the impulse and the sounds, of the patient's narrative, and of his general condition, will leave little room for doubt. But it is otherwise in the commencement of those examples of disease, unproclaimed by valvular murmur, or by recent acute inflammation, and attended by no very obvious alteration of the impulse, sounds and rhythm of the heart, alteration in the colour of the blood, or dyspnœa, not referrible to disease of the lungs and bronchi themselves. The difficulty is indeed great, in such cases, to decide at one examination of the patient at the physician's house. I have generally found the heart, when only functionally affected, to be very agitated on the first visit of the patient, and to convey to the hand the feeling of an enlarged organ. It is well, under such circumstances, not to proceed at once to the examination, but cheerfully to divert the patient's mind, and to have a second, or even a third examination. If we still find the impulse beyond its normal force and boundaries, we are scarcely warranted in allowing humanity, or a regard for the patient's feelings, to lead us to assure him that there is no disease. Whenever disease, though moderate, has been diagnosed, I have deemed it my duty to inform the patient of it. A contrary course would have compromised his interest, by interfering with suitable and persistent treatment; and the risk of evil from apprehension has been avoided, by explaining that disease of the heart is manageable; that it is, for the most part, contrary to general opinion, not remarkable for its rapidity of course, or for the suddenness of its termination. After all, it is often more a matter of curiosity than of real importance to the patient, to decide whether the heart is or is not what is usually called organically altered; for we find the worst consequences, such as venous congestion, dropsy, and death itself, following very moderate change; while, on the other hand, persons have lived for many years with great alteration, both of valves and walls, without heart-disease having been even suspected, and have ultimately died of other affections, to reveal after death, for the first time, the true condition of the great central organ.[1] If there is, how-

[1] For an illustration of this fact, see Dr. Semple's paper on Diseases of the Heart, in the London Journal of Medicine for November 1850.

ever, one condition that it is important to diagnose, it is the soft flabby inefficient heart: that is, of all other changes, the most important; and it signifies little whether or not it be conjoined with enlargement or valvular alteration. In this form of disease, the sounds are weak, and the pulse intermittent, irregular, and feeble. But the blue or pallid countenance, the continuous dyspnœa, the tendency to œdema, the general debility, and the softness and weakness of the voluntary muscles, will greatly assist the diagnosis. Amongst the first symptoms of disease of the heart I have found a moderate amount of pretty constant dyspnœa, with a sense of stoppage at the left nipple, followed by a knock. These symptoms have led, in some instances, to the diagnosis of heart-disease formerly unsuspected.

Prognosis. The prognosis, judging from the cases given in this paper, may be favourable when there is no very great narrowing of the outlets, when the heart is still possessed of tone, and when the patient is young and in fair general health, and when the disease is confined to the heart. Youth enables the suffering organ, for the most part, to maintain a suitable balance between increased obstruction to the propulsion of the blood, and the increased force demanded. The heart becomes larger and more powerful in its contractions. The prognosis is unfavourable when there is great obstruction or inefficiency of valve, permitting regurgitation into the veins, when passive congestion takes place in the viscera, and dropsy manifests itself. When the heart has become soft and flabby with very inefficient action, especially if conjoined with anæmia, there remains little or no prospect of lasting improvement. Persistent dropsy and repeated hæmorrhage argue a fatal termination. Old age and enfeebled health afford little resistance to the increased difficulties of the circulation. If the heart becomes larger, it is chiefly by dilatation and mechanical extension, aided by a soft expansile and atonic muscular structure, and marked by false movements, alike unfavourable to the currents of blood to the heart, and to the discharge of blood from it.

Treatment. In the treatment of those examples in the disease which was confined to the heart, the indications which were kept in view, were:—1st. The abatement of inflammatory action, even in the most mitigated forms, by the application of leeches, counter-irritation, and the usual measures. 2nd. The abatement of inordinate action, by the use of harmless sedatives, such as hyoscyamus, and conium, or lactucarium. When the action was great, and attended with pain, morphia was administered. When quieting was required at the same time that a tonic was admissible, hop was administered with great advantage: it was usual to continue its use for weeks, often in combination with a bitter infusion. When vigour was wanted, and there was no extreme irritability, iron was found to afford lasting advantage.

In the treatment of the more serious cases, those complicated with congestion, hæmorrhage, dropsy, etc., the objects of the treatment were more numerous.

A heart organically altered is not incapable of inflammatory action. It was therefore necessary, on some occasions, to adopt measures against this evil. But great care was taken not unnecessarily to tax the powers of the system.

When congestion occurred, the treatment consisted in gently soliciting the secretions of the part affected, if a secreting organ; if the head or lungs were affected, a few leeches, or the cupping glasses, were applied in the neighbourhood; and when circumstances would admit, mild purgatives were employed. The congestion of the brain, in one example, was so great in consequence of regurgitation, that, though the patient was anæmic, it was deemed necessary, in order to save him from an attack of apoplexy, to open a vein in the arm, and draw two or three ounces of blood. The result was satisfactory. The patient was immediately relieved from severe pain, and an almost delirious state; and no obvious increase of debility followed.

In these examples very violent palpitation occasionally occurs, causing pain, dyspnœa, and extreme anxiety. The stronger sedatives, such as morphia, are then demanded. The effect of morphia, under such circumstances, has been most gratifying; a quivering heart, with rapid and extremely small and irregular pulse, has within an hour been changed into a comparatively quiet and efficient organ, with a soft, full formed, calm pulse. Under such quieting treatment I have known even very marked regurgitation of the jugular veins to disappear; the venous blood finding a more ready passage through a better working engine. For constant use, to prevent inordinate over-action, the tincture of hop has proved of inestimable value.

Dropsy demanded much attention. When it depended on congestion from direct heart obstruction, the saline purgatives and diuretics were administered. When a slight stimulus was admissible, the spirit of nitrous ether was added. These means, for the most part, gave some relief. When dropsy depended on debility, as it did in some examples towards their fatal termination, the evil was met by the use of spirits of ether, in a little infusion of broom tea and squills, supported by the moderate employment of Hollands.

In those examples of dropsy dependent on visceral congestion, as not a few were, an attempt was made to remove this secondary condition. When the liver was obstructed, a few leeches were applied over it, and mercurials administered according to the resources of the patient. When the kidney was congested, little good followed the use of diuretics. When all other means failed to relieve pressing dropsical swelling, recourse was had to the formation of an artificial outlet in two cases, and with manifest advantage. One of these cases was ascites; the other, general anasarca. No evil whatever resulted. In the case of anasarca, small incisions were made along the legs, and the fluid trickled out for days, until the whole dropsical effusion was got rid of, much to the comfort of the patient. The adjoining integument was besmeared with some simple ointment, and the leg was enveloped in dry, soft, chamois leather, which imbibed the fluid as it escaped, and formed a bland warm application to the limb; a happy exchange for hard irritating linen cloths.

In dropsical effusion, extraordinary benefit has been observed to follow the use of mercury in some of these examples, as well as in other cases. When œdema of lungs has threatened, a few grains of blue pill, combined with squills, have afforded great relief to the respiration and much increased the flow of urine. When the whole catalogue of diu-

retics had in vain been tried, and scarcely an ounce of urine would be passed in twenty-four hours, with increasing effusion in the different cavities and in the cellular tissue, it has appeared desirable to restore the urinary secretion, even at some cost to the patient. Mercury under these circumstances has been administered, but with varied results. One circumstance commonly noticed has been the difficulty of affecting the gums; extraordinary quantities of mercury have been given before the slightest effect has been produced upon those parts. The difficulty has been, for the most part, proportioned to the obstruction of the circulation and the debility of the patient. When the gums have been at last affected with the red mercurial line, and the health has become slightly touched, then the urinary secretion has, in some instances, been surprisingly and suddenly rendered abundant. In example No. 36, in which anæmia existed, the gums, notwithstanding the long and free use of calomel and blue pill, remained pale and like white wax. At length a faint red line fringed the gums; this was the signal for the urine to flow in almost incredible amount. One day, I left the patient to pay a visit to Boulogne; he was then an enormously swollen man, lying very ill in bed. In three days I returned; he met me in the lobby, a thin and emaciated person; so great was the change, that I jocularly inquired of him how my patient up-stairs was going on, affecting not to recognise him. The gums had become tender, the mercury had told in some extraordinary way upon the effusion, and in three days had totally removed it, although every variety of diuretic and every contrivance had been employed for this object, for weeks, in vain. After a lapse of some considerable time, the dropsy and suppressed urine returned, but again to be removed by mercury. Dropsy finally established itself again, and the patient died in the country thoroughly exhausted. Did the mercury primarily act upon the kidney? did it excite the absorbents to increased activity? did it so act upon the heart as to cause it to operate with more efficiency upon the mass of blood and urge it along more readily in its hitherto reluctant and retarded course, unloading the distended and inactive veins, and filling the empty arteries, so as to supply an increased pabulum to the secreting organs whence the secretions might be withdrawn? or did it for a time mitigate visceral obstructions? In one way or another, it appeared that the pabulum supplied to the kidneys, in common with other organs, was increased at this time, for the pulse was decidedly larger than before.

The stomach presented some disorders for rectification. Irritability and vomiting required treatment. When the ordinary means failed, recourse was had to the use of ices, with extraordinary benefit. Iced mint tea was very grateful, and contributed to abate vomiting. Flatus proved the source of great distress to several patients. Various carminatives were employed, but with very partial and varied success. Purgatives afforded most relief. The examination of the body of No. 39 revealed such an enormously distended stomach, as fully to explain the great sufferings of the patient from flatulence. When the walls of the abdomen were divided, the stomach rose up in bold relief, an enormous bag of air, far above the other organs. It occurred to me, on reflecting on this condition of the stomach, and the great distress it caused the

patient, who always maintained "it was only his stomach", that it would have afforded the sufferer great relief if a narrow elastic tube had been passed down the œsophagus, and had given vent to the pent-up gas.

I believe that such an instrument might under similar circumstances give great, though possibly only temporary relief. For a time, at least, it would comfort the patient, and give the heart more room to act. It is not impossible, moreover, that more than temporary advantages might result from it. Relieved from continued distension, the stomach might regain some of its long-lost tone, and less readily permit the evolution of gas, and more willingly contract upon it and cause its expulsion. I had lately an opportunity of observing how relief from long-continued distension of an organ will restore its tone and contractility. A gentleman, aged 40, consulted me for incontinence of urine of many years' duration. It had caused him and his family very great annoyance. I introduced a catheter into the bladder, more for the purpose of exploring the urethra than of emptying that organ; a large quantity of urine came away. Next time I saw him, he was extremely delighted to inform me, that ever since I had passed the catheter, he had made water as well as he had ever done in his life, instead of his urine constantly dribbling away from him. Instead of incontinence, he had distension; and the temporary relief afforded by the catheter, led to a complete cure. It is not too much to hope, that some similar advantage might follow the discharge of the long pent-up air in a distended stomach. Mr. Coxeter of Grafton-street has supplied me with an instrument, but I have not yet had the opportunity of testing its value in practice.

It is a highly important indication to retain the heart in a state of good muscular tone; and where this has given way to weakness and atony, to restore it as far as it is practicable. To retain the vigour of the heart is chiefly an object in cases of disease uncomplicated with secondary disease; for where these have occurred, the heart is, for the most part, found to be already greatly reduced in strength and efficiency. The means of effecting this object, in the more local examples, has been already noticed. If judiciously employed, they may prevent the accession altogether of the more advanced stage, or, at least, abate its progress. Fortunately we have means within our reach by which the advancement of softening and relaxation, when already begun, may be controlled; and even, under favourable circumstances, to a certain extent corrected. Amongst the foremost of these means may be ranked a sound liberal diet, comprising a large proportion of red fresh animal food, with, where circumstances connected with the health and constitution of the patient will permit, a little sound light wine; pure air; moderate exercise and driving; vegetable and mineral tonics, including sulphuric and nitric acids; and above all such tonics, for continuous use, particularly where anæmia is present, and there is freedom from irritability of the stomach, the various preparations of iron recommended in my work on its beneficial employment in such cases. One other great means of equalising the demand made upon the heart and its ability, besides doing what we can to strengthen that organ, is to relieve it as far as possible of its labour. The adoption of the recumbent or semi-recumbent posture for half

an hour, two or three times in the course of the day, will go far to prevent the still somewhat vigorous organ becoming flaccid, and give the flaccid organ a period of comparative rest, and an opportunity to recruit itself. I have reason to know that this practice has proved of essential service, and, for the most part, it is not ungrateful to the patient. Cold sponging proves of great service in this direction, and even cold bathing, in some cases, I believe would prove highly beneficial: but care would be required in the selection of examples adapted for its employment.

A course of moderate counter-irritation, at the region of the heart, has proved of great service. It has certainly kept pain in check; and has appeared to regulate action, and retard the progress of morbid growth. It is well effected by means of chamois leather dipped in linimentum ammoniæ.

TABULAR VIEW OF FORTY-TWO CASES OF A. TWENTY

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
1	M. C.	10, F.	Comfortable.	None recorded.	Acute rheumatism, twice, treated without loss of blood.	Three months.	Hypertrophy, with mitral valve alteration.
2	M. L.	61, F.	Exposure.	None.	Weakness and chronic bronchitis for years.	Probably some years.	Dilatation.
3	T. C.	26, M.	Habitual excess in spirits; violent exertions; shaking the person in twisting hair.	None.	Gonorrhœa five years ago, followed by hernia humoralis, leaving to this time swelling of testes.	Two years; but aggravation two last mths.	Hypertrophy.
4	M. S.	25, F.	Quiet; comfortable.	Father died of ossified. heart, aged 70.	"Frequent attacks of infl. in lt. side of chest," treated with leeches and blisters.	Two years.	Hypertrophy and dilatation.
5	J. C.	26, M.	Comfortable.	None.	Acute rheumatism in joints and muscles, six years ago; not tr. for a week, then removed to hosp., where had leeches appld. to region of heart.	Six years.	Hypertrophy and dilatation.
6	B.	72, F.	Expos. to cold, wet, and steam.	None.	Gout, with deposit in hands, during last 14 years.	Ten years.	Dilatation and hypertrophy.
7	J. J.	9, M.	Quiet; comfortable.	None recorded.	Scarlet fever immediately before, during wh. pleurisy, leaving slight hepatisation of left lung.	Some weeks.	Moderate hypertrophy.

In conclusion I shall add, that the treatment to be as successful as it should be, the nature of each case must be made out, the broad indications recognized, and the most efficient and simple means of fulfilling them suitably employed. With this rule reduced to practice, the formalities of routine may be dispensed with. The necessarily limited character of a communication of this kind prevents my alluding to many topics of great therapeutic interest which I otherwise should gladly have touched upon. The same want of space has reluctantly prevented my referring to the valuable contributions, on the same subject, made by many eminent members of the profession. In further apology for this omission, I have to remind my readers that I have not aimed at the higher office of writing a treatise, but simply proposed to occupy the humbler field of relating some of my own observations.

Park Street, Grosvenor Square, March 1851.

STRUCTURAL DISEASE OF THE HEART.

SIMPLE CASES.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse much increased, fremissement cataire, loud systolic murmur.	Much palpitation.	Not recorded.	Not recorded.	Not recorded.
Sounds loud, situs of heart increased; heart's contractions weak, disturbed; p. very intermittent.	Palpitation, moderate dyspnœa; occasional pain in head.	Hyoscy. for dyspnœa & palpit., pil. rhei c. to regulate bowels, lin.terebin. for bronchitis.	Improved considerably.	Improved.
Unusual succussion of præcordial region, impulse greatly increased, situs increased; first sound strong and rough.	Great palpitation, faint feeling at heart; moderate dyspnœa; p. weak, small, compressible; dyspepsia and flatus.	For recent aggrava., six leeches to præcardia, digit. hyoscy., sulp. magnesiæ, leeches repeated, Plummer's pill.	Was greatly relieved of urgent symptoms.	Relieved.
Tremor of ribs, great impulse, situs much increased, sounds strong.	Violent palpitation, dyspnœa; p. small, firm, intermittent.	At first leeches to præcordia, digitalis intern., subseq. prep. of iron.	No benefit followed the applicat. of leeches and the administration of digitalis; gen. health was much imprvd., and palpit. reduced by iron.	Health improved and local symptoms mitigated.
Trembling of ribs, situs increased, apex felt at seventh rib; impulse increased, and as if heart were unusually hard.	Palpita.; weak small pulse.	Rhubarb and magnesia, subseq. chalybeates.	Not recorded.	Not recorded.
Situs of heart increased, impulse increased; sounds loud; dilated veins in neck.	Palpitation, dyspnœa, cough, weak pulse.	Vegetable tonics, spir. of nit. ether.	General health improved, and local symptoms relieved.	Relief.
Situs and impulse moderately increased; veins of neck dilated; præcordial region more prominent than corresponding part of opposite side.	Palpitation; p. regular, weaker at right wrist than at left; moderate lividity of face.	Hydrarg. c. cretâ, carb. sodæ, hyoscy. first few days, subseq. iodide of iron.	Secretions improved and palpitation abated under first part of treatment; general health greatly restored by the latter portion.	Much relieved.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
8	M.	43, F.	Comfortable.	—	Rheumatism 17 years ago; injury of the right foot 12 yrs. ago; hence considerable lateral distortion of spine, raising right shoulder 3 inches above left.	Eleven years.	Hypertrophy.
9	S.	32, F.	Comfortable.	Rickets, small development.	Inflammation in chest when 8 years old. Bony fabric has been ill developed.	Fifteen years.	Hypertrophy and dilatation to a moderate extent.
10	W.	36, F.	Sedentary.	Rickets.	Bony fabric ill developed, short and contracted. Slight distortion of cervical spine in early childhood.	From childhood.	Hypertrophy and dilatation.
11	R. L.	18, M.	Violent exertions; temperate.	—	None.	Some years.	Hypertrophy, dilat., aortic valvular disease, and aortic aneurism?
12	S. S.	10, F.	Comfortable.	—	Acute rheumatism a year ago; a second attack 2 months ago, during which heart became implicated; ill attended to, and permitted to go out of doors; no bleeding till heart implicated.	Two months.	Mitral valve disease; moderate hypertrophy.
13	H. M.	3½, M.	Comfortable.	Parents highly nervous.	Spasmodic croup, very severe, and continuing some weeks, causing convulsions for some days. Disease induced by feeding, occurred 4 months before heart disease discovered. Influenza during croup.	Three years.	Disease of valves; moderate hypertrophy.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse increased in force and in situs, sounds dull. Heart displaced to right of sternum by distortion of spine, and contraction of left side of thorax.	Much palpitation for years, constant dyspn.; weakness; small pulse, 100; flatus.	Rhub. and soda to improve secretions, vegetable tonics, foll. by iron.	Health improved much; the benefit from the use of iron was very marked; the palpitation was nearly removed, and the increased impulse was greatly abated.	Much relieved.
Impulse of heart constantly increased, slightly in force, greatly in extent. Sounds rather dull, jugular veins dilated.	Palpitation, violent and frequent; pulse weak, intermitt.; slight congestion of head; headache.	Iron.	Patient gained much strength from use of iron; health was greatly improved during some years from commencement of treatment, and was the same when patient was last seen.	Relieved.
Situs of heart increased, impulse increased in force. Jugular veins dilated; intermittent action.	Palpitation, intermittent pulse, dyspnœa; moderate debility; oppression in head; much flatus.	Leeches over ht. to reduce suspected congestive action, hyoscy. intern., and cataplasm of morphia to præcordia for same purpose, purgatives.	Patient derived great advantage from this treatment; palpitation greatly reduced, so was the oppression in head; morphia acted well as a sedative; a removal to country made disease of heart almost disappear.	Great relief.
Situs of heart increased, impulse extended, action heaving; slight souffiet accompany. systole, heard at 2nd and 3rd ribs on left side; left clavicle slightly elevated, 2nd & 3rd ribs bulging; sounds of heart low.	Violent palpitation, pain in region of heart; intermit. very weak pulse; sibilus at second and third ribs.	Leeches at first, then saline laxatives, followed by vegetable tonics.	The pain at heart, which had followed great exertion, was reduced by leeches and salines, and the general health was subsequently established by tonics and country air; three years after the patient was no worse.	Relief.
Loud systolic sound resembling "ha", breathed very loud, loudest at apex, extending to third rib; increased action of heart.	Sense of pain; palpitation; disturbed health; p. weak, regular.	Numer. leeches to præcordia immediately, calom., Dover's powder, and colchi., iodide of iron.	Under first part of treatment, pain and inordinate action greatly abated, and pyrectic sympts. removed; iron gave vigour and "patience" to heart and improved general health; sound became greatly less loud and harsh.	Relief.
Very loud systolic sound, very prolonged, resembling "ha" harshly breathed out, masking first sound, and rendering second sound difficult to be heard; loudest at sternum, level with third rib; but heard nearly over the entire chest; moderate increase of heart's situs & impulse; veins of neck rather full.	Moderate continuous over-action of heart; no other symptoms whatever; pulse regular, good size, and firm.	Pure air, a wet-nurse at first, occasional residence in the country, no medicine.	Has enjoyed good health, and has grown a fine blooming boy; but sound is the same, and action of heart still preternaturally great.	Perfect health.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
14	E. B.	18, F.	Destitute.	—	General debility, bad development. Small-pox in infancy. No rheumatism.	Some years.	Mitral valve disease; moderate hypertrophy.
15	E.	43, F.	Comfortable.	—	Large abscesses in groin, and in loins, discharging quarts of pus, now healed.	Six months certain, but probably more.	Dilatation; moderate hypertrophy.
16	S.	80, F.	Comfortable.	None.	Recent contus. of hip; great distortn. of spine, begun only a few weeks back, throwing the chin upon the right clavicle; obliterating the neck, distorting thorax, and reducing entire length about one quarter, rendering patient, formerly very tall, very short.	Unknown; discovered only a week or two before death.	Valvular dis., with hypertrophy. Aortic outlet reduced by distortion of chest.
17	J. C.	20, M.	Comfortable.	Weakly health.	Distortion of thorax begun in childhood, has increased latterly; thorax at heart decidedly depressed, to right of sternum protuberant.	Some years.	Moderate hypertro., from moderate distortion of thorax.
18	W. E.	20, M.	Comfortable.	—	None.	Congenital.	Moderate hypertrophy.
19	C.	22, M.	Gymnastic exercises.	—	None. Front of thorax unduly prominent, from gymnastics.	Some years.	Moderate hypertro. from gymnastic exercises.
20	B.	26, M.	Exposure to cold.	Delicate health.	General delicacy from childhood. Moderate malformation of chest, with deficiency of left side. Want of beard and whiskers: singularly youthful appearance.	Some years.	Moderate hypertro., with excited action, connected with malformation of chest, and deficient lft. side.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Loud hissing sound replaces first sound; impulse of heart increased.	Papit., dyspnœa, cough, P. somewhat weak, regul., weakness, pain in head, cong. of lung., vom. from irritab., occas. looseness.	Tincture of hops, with gentian infu.	Vomiting allayed, general health improved, and less palpitation.	Relief.
Impulse increased in force and extent; sounds clear.	Palpit. very severe and frequent, dyspn., weakness, P. small, hard, regular, some pain in heart formerly, occas. vomiting.	Morphia, for pain in heart, on one or two occas., conium and hyoscy. internally, & lin. ammo. and leeches exter., to abate palpitat.	Pain held in check with morphia; palpitation much reduced by other treatment.	Relief.
Loud systolic bellows sound, loudest a little above nipple; impulse increased; veins of exterior of chest dilated.	Moderate excitement of heart, recent œdema of feet.	Mild diuretics, hyoscyamus.	Nothing was attempted in this case but to relieve symptoms.	Died a week or two after valvular murmur discovered. No necropsy.
Impulse strong, heaving, and unduly extended; sounds rather dull.	Palpit., faintness, weak pulse, intermittent; occasional trifling hæmoptys.; moderate dyspeps.	Tonics, country air, exercise, iron.	No hæmoptysis of late, general health is improved, and over-action of heart moderated.	Relieved so as to attend to business.
Impulse decidedly increased in extent and force; sounds rather dull.	Occas. palpitation; occas. pain in region of heart; health good, pulse strong.	Pil. conii., moderate exercise and exertion, pure air and good diet.	Pain removed, palpitation somewhat reduced.	Over-action of heart moderated.
Impulse decidedly increased in extent and force; and action heaving.	Palpitation occasionally, over-action constant., occasional faintness; P. weak, pallor of counten., pains in region of heart.	Quietude, sedatives, chalybeates, abstinence from gymnastics.	Palpitation reduced, but over-action continues, general health improved, less faintness.	Improved.
Impulse increased in force and extent; heart is felt beating on right side of sternum, in which direction it is forced by depression of left side at præcordia.	Fits of palpitat., constant over-act., moder. dyspnœa, with dry rhonchus; pallor, feeble rapid pulse., iritability of stomach & vomiting; great emaciation and debility; irritability of bowels from jalap, &c., chronic bronchitis, dry rhonchus.	Small dose of calomel with hyoscyamus and aloes at first, followed by hyoscyamus and camphor, hops and liq. opii, lin. terebinth. externally, iron.	Extraordinary benefit from treatment, no vomiting, though fits of palpitation; constant action of heart reduced, P. quiet, stronger, T. clean, appetite enormous, patient and friends astonished at change, death being soon apprehended. The tinct. of hops with liq. opii was particularly useful in allaying irritability of stomach and supporting system; iron is well tolerated and is giving bloom to face.	Symptoms relieved to only moderate extent; over-action of heart.

B. TWENTY-TWO CASES,

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Signs.
21	C.	49, M.	Sea-faring; exposure, dissipation.	No record.	Fever in India. Fistula in ano.	Probably many years; only now discovered.	Hypertrophy, without orificial alteration.	Action heaving, situs increased, impulse increased, pulse hard, jugular veins dilated and pulsating.
22	N.	75, M.	Laborious; spare living.	Scrofula in family.	General delicacy from infancy, symptoms resembl. those of gall stones. Indigestion, pneumonia.	Probably many years.	Hypertrophy, ossification of aortic valves.	Action strong, heaving; impulse increased, situs increased. P. hard, veins of neck much dilated. Heart's sounds rough; murmur with 1st sound, inaudible before death.
23	R. C.	17, M.	Exposed to weather.	Rheumatism.	Acute rheumatism four years before, treated with leeches to chest.	Known for two years.	Immense hypertrophy, with mitral valve disease.	Apex of heart felt beating at 8th rib: impulse very great. Præcordial region prominent; 1st sound a loud prolonged rasp. Pulse weak, irregular, forms abruptly.
24	C. W.	40, F.	Exposed to cold and wet.	Consumption.	Inflammation in chest from cold.	Three years.	Dilatation, with weakness.	Action of heart masked by respiratory sounds. P. very irregular, weak.
25	J. B.	62, F.	Comfortable.	Rheumatism.	Two miscarriages, causing great debility, slight hæmoptysis 4 years ago.	Twenty years.	Hypertrophy, with dilatation, roughness of aortic valves.	Impulse increased, situs increased, 1st sound rough, jugular veins dilated. P. firm, small, slightly intermittent.
26	J. W.	61, M.	Exposure to cold, dissipation.	Consumption.	Rheumatism on several occasions, hæmorrhoidal dischrg. frequently till four years ago.	Three and a half years.	Hypertrophy, ossification of aortic valves with spicula.	Impulse increased, blowing systolic sound; jugular veins dilated.
27	C.	50, F.	Quiet, comfortable.	None.	Repeated attacks of inflammation in chest, fever.	Many years.	Hypertrophy.	Situs and impulse of heart increased, 1st sound rough, jugular veins dilated.
28	M. F.	40, F.	Exposure to cold and wet.	None.	No disease.	Three years.	Hypertrophy.	Situs from 3rd and 7th rib and to right of sternum. Impulse increased; 1st sound loud, rough.

H SERIOUS COMPLICATIONS.

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
lpitation, dys-, exhaustion.	Active congestion of head; contr. pupils; cong. of lungs, with dry rhonchus; albuminuria, alternating with melæna; hæmoptysis formerly, lately hæmatemesis, now melæna; œdema of feet; flatus and vomiting.	Hydrocyanic acid for stom.; cupping at back for lung-congestion.	The patient being in an almost dying state when first seen, profited little by treatment.	Died in a few days.	Heart nearly double usual size, orifices healthy, liver healthy, kidneys rather small.
pnœa, palpita-	Passive cong. of head, headache, dil. pupils, emphys. lungs, left lobe of liver filled with hydatids, œdema of feet, ascites, flatus, eructations.	Hyoscyamus. The hydatid tumour rendered the heart disease of only secondary importance.	Only moderate relief to dyspnœa, and palpitation reduced by hyoscyamus.	Death.	Heart double the size of patient's fist, walls thickened, aortic valves ossified so as neither to open or close perfectly.
pnœa, palpita- lebility.	Anas. of legs, sloughing of integuments, ascites; liver's edge 2 in. below cartil.: jaundice; much flatus.	Mercury for liver; iron to strengthen system and heart; greatly weakened by previous loss of blood by leeches.	Under care of a well-known physician, breathed through a tube for a long period, but to no account; mercury reduced liver, removed jaundice; iron restored the general health and invigorated heart's action for some years.	Died some years after.	None. Through an omission on the part of the gentleman entrusted with the case, during indisposition of the writer, the opportunity of making an examination was lost.
lpitation, dys-	Œdema of feet and emphysema, chron. bronch., occas. hæmopt., flatus.	Preparations of iron.	Very striking improvement in the general health, and in respect of the chest followed the treatment.	Greatly relieved when last seen.	
pitation, dys- pallor, exhaus-	Anas., melæna, oppress. in head, cong. of lungs, flatus.	Tonics, spirits of nitrous ether, brandy.	Material benefit from treatment.	Died in a few months.	No examination was permitted.
ut exhaustion, dyspnœa, violent ation.	Albuminuria, extens. ascites, anas. of legs and hands, congest. of head, atrophy and cirrhosis of liver; flatus and vomiting.	Spirits of nitrous ether in broom tea.	The patient being in a dying state when first seen, little or no relief was afforded.	Died in two days.	Heart's wall enlarged, cavities increased somewhat, heart weighed 25 oz., pericardium adherent, aortic valves had ossific deposit with spicula, pleural adhesions, cirrhosis, liver weighed 2 lbs. 9 oz., omentum much shrunk; tubercle size of pigeon's egg, containing tuberculous matter, in right kidney; peritoneal covering of liver and spleen thickened and white.
pitation, dys-	Urine scanty, melæna, passive cong. of head, cong. of lungs.	Vegetable tonics and spirits of nitrous ether.	Health much improved.	Health improved.	
ent palpitation, dyspnœa, strong pulse.	Occas. slight hæmopt., great cong. and throbbing of art. in head, with suicidal tendency.	Leeches to præcordia; hyoscyamus.	Treatment afforded much relief.	Much relieved.	

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Sign
29	G. T.	62, M.	Violent exertions.	None.	Contusion of breast from kick of horse.	Twenty-seven years.	Dilatation without orificial alteration.	Situs increased pulse ordinary, so loud.
30	J. G.	36, M.	Very violent exertions as a coal-heaver.	None recorded.	None recorded.	Probably some months.	Not clearly made out.	Not well expl. Further examina was postponed, o count of the unwa state of the pe till next day, but d prevented further vestigation.
31	B.	47, M.	Great excess in use of brandy for years.	None recorded.	None recorded.	Probably some years.	Great dilatation; attenuated, soft, and fatty walls; aortic & mitral valves ossified.	A bellows soun companied sys Pulsation of jugu
32	E. C.	55, M.	Dissolute.	——	None.	Years.	Hypertrophy, softening.	None reported
33	W. S.	49, M.	Laborious.	——	Colica pictonum from employment as a painter.	Believed by patient to be nine months.	Great enlargement and dilatation, with immense aneurism of aorta.	Projection on r of sternum, bac 2nd, 3rd, 4th ribs, h ing of heart's re Heart's sounds w systolic bellows so loudest at 3rd rib, stolic sound prolon with slight souffle

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
itation, flutter- heart, dyspnœa, stion, P. rapid, regular.	Anas. of legs, extens. œdema, mod. hydrothorax and hydropericard., œd. of lungs, cong. of brain, epilepsy (15 years), liver mod. cirrhosed, much flatus.	Spirits of nitrous ether, broom tea, calomel, and squills.	Patient was obviously sinking when first seen, and as he died in two days the treatment was of no use.	Died in two days after first visit.	Pericardium healthy, contained 2 oz. reddish serum; heart voluminous, size of extended hand and fingers; walls soft, not thickened; cavities enlarged; orifices and valves healthy; some reddish serum in both pleuræ; œdema of lungs; they were soft, and felt like a polypus, smooth, and when cut into, discharged red serum; red serous fluid in peritoneum; liver atrophied, hardened with streaks of white coagulated lymph pervading its structure; peritoneal cavity rough and adherent; spleen small and hardened; stomach & intestines congested.
nœa for some s. of late ortho- veins of neck di- P. rapid, weak, g.	Great anas. of lower extrem. (5 wks.), œdem. of lungs, occasion. hæm. fr. bowels, stup. some days, convulsions before death.	Spirits of nitrous ether, broom tea, calomel, and squills; cordials; supporting diet.	No result from treatment.	Died in two days.	
dyspnœa, sink-	Anas. of legs, mod. hydrothorax and ascites, cong. of head, with sense of oppression; liver enlarged, right lung pushed up, cong. of stom., flatus, vomiting.	Not recorded.	Not recorded.	Death.	Much subintegumentary fat; heart of large volume, with all the chambers unusually capacious, covered in front with much fat, very soft breaking down under the fingers, like soft liver, of dark colour; the columnæ carneæ were the only muscular parts of the right ventricle; calcareous deposit, size of a barleycorn, in mitral valve; tricuspid and pulmonary valves healthy; cirrhose of liver, w. hob-nailed surface; gt. enlargt. rising on right side to near the 3rd rib; a few oz. of gravy soup-looking serum found both in thorax and abdomen; lungs greatly gorged with dark blood, and thrust up to the superior part of chest, on right side by liver, and on the left by the enld. hrt., and the stom. greatly dis. with gas.
cial symptoms.	Bright's dis. of kidney in first stage, tubercles and cavities in right lung, liver enlar. and hard.	Not recorded.	None.	Death.	Particulars already given in part. Prostrate gland enlarged; heart enlarged and soft; aorta presented numerous patches of steatomatous deposit.
of throbbing at eeling of prick- smarting at houlder and in ough, dyspnœa, ysis, food ap- to be arrested r four inches sophagus, ema- œdema of face.	Œdem. of face, cong. of lungs, hæmoptysis.	V. S. Leeches over heart; morphia.	Pain and cough much relieved by bleeding; morphia afforded sleep and comfort.	Death.	Great enlargement of heart, walls somewhat thickened, chambers enlarged, valves healthy, aneurism of ascending aorta, size of a child's head.

No.	Name.	Age and Sex.	Habits of Life.	Family Diseases.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Sign
34	H.	57, F.	Comfortable.	——	Metritis; white leg seven years ago, after accouchement.	Seven years.	Hypertrophy.	Situs of heart creased, impulse creased, action ing, sounds dull.
35	W.	34, F.	Comfortable.	——	Two miscarriages, the last followed by inflam. of womb and white leg. No rheumatism.	Fourteen months.	Mitral valve disease, dilatation, hypertrophy.	Systolic soundra bling the word " softly pronou loudest at 6th rib pulse increased in and extent, vein neck dilated.
36	H. W.	40, M.	Dissipated. Excess in spirits.	None.	None known.	Some years.	Hypertrophy, dilatation, tumultuous action.	Impulse increa unduly exten sounds dull. N normal sounds. I ation and regu tion of jugulars nous murmurs anæmia.
37	V.	59, M.	Exposure to cold. Excess in spirits in early manhood.	None recorded.	None recorded.	Probably many years.	Hypertrophy, dilatation, mitral valve disease.	Impulse increas force and ex sounds dull; sligh lows murmur, lo at apex, systoli weak, intermitten ruptly formed. face.
38	B.	40, F.	Comfortable.	None.	Acute rheumatism.	Eight years.	Hypertrophy and dilatation.	Impulse greatl tended, moderate creased in f sounds dull. P tion of ribs at pulsating.
39	F. G.	65, M.	Exposure to cold.	Gout.	Pleuritis, pericarditis, endocarditis, some 20 years ago, from exposure to rain and cold. Gout.	Many years; probably twenty.	Hypertrophy, calcareous deposit of aortic and mitral valves, great thickening of endocardium, softening.	Moderate increa impulse observe one or two occas with great difficul account of rhonc purple face.

Symptoms.	Complications,	Treatment.	Effects of Treatment.	Result.	Autopsy.
pitation, throb- at apex of chest, tense pulse, œde- lyspnœa.	Formerly as- cites, œdema of feet, throbbing of head.	Purgatives and diuretics, in- cluding jalap, colocynth, and blue pill, spirits of nitrous ether.	These evacuants gave relief, but debility in- creased.	Relief.	
pitation, great ıœa, P. regular, reat debility.	No org. dis. of kidney, but ur. at times nearly suppressed; ex- tensive ascites, effus. in both sides of chest, cong. of bronch., liver greatly swollen.	Mercury to sa- livation before my treatment, but of no avail; magnes. sulph., squills, broom, and calomel, io- dide of potass., compound jalap powder, tapping abdomen, ferri potassio tartras, spirits of nitrous ether.	Treatment of no avail till abdomen tapped; little fluid came away at once, but continued to ooze out for days; this gave great relief; the urine came away in in- creased quantity, and di- uretics acted with more readiness; iron gave strength, but patient died soon after, under the care of another medical attendant.	Tem- porary relief; death.	An autopsy was made, but the only particulars obtained were "heart and liver greatly dis- eased."
pitation, irregular mittent action, nœa, dilated veins, ular intermittent , dropsy, hæmor- e, etc.	Ascites, anas., occas. hæm. frm. bowels to 1 pt., consid. hæmop., tuberc. at apex of rt. lung, great oppres. of head, delir. coma, liver gtly. enlarged, flatus.	Tonics, diu- retics, purga- tives, mercury, bleeding.	Very slight benefit to dropsy, and tumultuous and regurgitant action of heart till within a day or two of gums becoming tender under mercury, which was long of being effected; on two occa- sions the urine passed copiously and carried off the dropsy in a few days; bleeding to extent of a few ounces gave great relief to agonizing op- pression in head.	Re- lieved; death after some months.	Dying in the country, no examination made.
atus in stomach, itation, pain of op- sion in region of t, dyspnœa, ana- a, delirium, and t.	Cong. of kid- neys, urine slty. album. once or twice, great op- press. of head, delir., coma at last, flatus.	Saline purga- tives and spirits of nitrous ether at first; slight bleeding for head; mercury and squills and scarifications for dropsy.	The first treatment so relieved the patient of flatus, that he believed himself cured; mercury and squills proved of little use, though con- tinued to salivation; dropsy effectually carried off by scarifications of legs.	Re- lieved for a time; died in a few weeks.	None.
lpitation, pain in on of heart, great nœa, anxiety of d, flatus, vomiting, sis, cough, hæmop- , emaciation, ame- hæa.	Frequent hæ- moptysis, cong. of lungs, pyrosis, frequent vomit- ing, flatus.	Bismuth, effer- vescg. draughts and opium, for stomachic irri- tation; rest in bed for excite- ment of heart; counter - irrita- tion; latterly vegetable tonics and chalybeates.	The stomachic irrita- tion completely subdued; heart became quiescent; the præcordial tumour was decidedly reduced; and the general health immensely improved.	Great im- prove- ment.	
eat dyspnœa, loud istent rhonchus, rly moist, oppres- in head, irritable per, immense dis- ion of stomach n flatus, anasarca lower extremities, isually regular, of lerate strength.	Extens. anas. of lower extr., no albuminuria, hydrothor., em- phys., œdema of lungs, congest., chronic bronch., oppres. of head, headache, slight hœmopt. 2 yrs. before, impati- ence; liver con- gest., stomach much distended by flatus.	Cupping of head and chest and bleeding for congestion; di- uretics, purga- tives, antispas- modics, stimu- lants.	The patient being full of blood, benefited great- ly by the loss of some ounces; he was bled a month before death, and so great was the conse- quent mitigation of the dyspnœa and rhonchus, that the sounds of the heart, till then inaudi- ble, became more dis- tinct than they had been for years.	Death.	Heart moderately en- larged, flabby, and soft. Pericardium adherent nearly throughout; en- docardium thickened throughout, quarter of an inch thick, and car- tilaginous in left ven- tricle; aortic valves os- sified; aorta ossified to considerable extent; emphysema of lungs, œdema of lungs; effu- sion in both pleuræ; congestion of lungs; enormous distention of the stomach from fla- tus; liver congested; kidneys congested; left presented a cyst, size of horse-bean, containing tuberculous matter.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Sign
40	S.	60, F.	Comfortable.	None.	Rheumatism.	Some years.	Hypertrophy.	Impulse stro and more exte than natural, hea
41	M.	40, F.	Exposure to cold.	None recorded.	None recorded.	Some years.	Hypertrophy to great extent.	Impulse greatly tended and incre in force.
42	G.	73, M.	Exposure in military service in tropics for many years. Drank freely.	None recorded.	None recorded. Had chronic irritation of bladder.	Forty years.	Great hypertrophy, with extraordinarily rapid action.	Impulse hard, ki ing, greatly exter succussion of the tire chest, perce through right s der; sounds dull, narily weak; no normal sounds.

CASE OF CREEPING BUBO, ILLUSTRATING THE EFFICACY OF MERCURIAL TREATMENT.

By SAMUEL SOLLY, Esq., F.R.S., Senior Assistant-Surgeon to St. Thomas's Hospital, etc.

In the London Journal of Medicine for May 1849, I published an essay on Creeping Bubo; and as the following case illustrates the utility of a mercurial course as therein recommended, I am anxious to lay it before the profession as an addition to my former communication.

Case. The patient, a Cambridge student, aged 23, of good general health, had been, before I saw him, under the care of Mr. Robert Brown of Brixton Hill, to whom I am indebted for the particulars of the case.

April 10, 1850. A chancre appeared within the urethra, close to the frænum, and was shortly afterwards followed by a swelling in the groin. Caustic was applied by a hospital surgeon, who also ordered blue pill and extract of conium three times a day. The chancre healed completely in about a week; the swelling in the groin suppurated, and was opened on the 16th April, but it did not heal.

June 1. He went to Ramsgate, and to Brighton, and took baths for a fortnight. At the end of June he again went to Brighton. On his return, the sore in the groin was found to extend under the skin for an inch and a half; this was laid open in its entire length on the 30th of June.

July 16. The patient consulted me. I expressed my opinion that

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
lpitation occasion- action always t, sense of flutter- pain darting from rt down left arm, lerate dyspnœa, de- y, weak pulse, 88, ılar, copious dis- rge of blood from gs on two or three ısions.	Copious hæ- moptysis once or twice, conges. of lungs, flatus.	Alteratives, hops, cinchona, stimulating em- brocation to chest and arm.	Palpitation somewhat reduced, and strength moderately increased; pain not materially re- lieved.	Some im- prove- ment.	
ılpitation, constant r-action, hydrotho- , anasarca of lower remities, dyspnœa, austion, aphthæ of gue.	Anas. of lower extrem., hydro- thorax, cong. of lungs.	Hyoscyamus, spirits of nitrous ether, seton at præcordia.	Some relief from hyos- cyamus and spirits of nitre; none from seton.	Some relief for a time; death after a few months.	No examination.
onstant over-action, h pulse about 80, quent fits of extreme- rapid action, with all scarcely percep- e pulse of from to 200; the action he heart resembled vering, and the foot en the legs were ssed would move the wheel of a ch; orthopnœa, œde- of feet and ankles erly, chronic irrita- n of bladder, with aline mucous urine, austion.	Œdema of feet and ankles some days before death, cong. of lungs, dry rhon- chus.	Morphia to allay palpita- tion; spirits of nitrous ether, squills, and sa- line diuretics; brandy, chloric ether; animal diet.	Morphia proved of im- mense service, would reduce pulse from 200 to 80; chloric ether in- duced extremely violent paroxysm of palpitation.	Great relief for a few days; death.	No examination per- mitted.

CREEPING BUBO. BY S. SOLLY, ESQ.

the disease was true *creeping bubo;* and that I was afraid it would not heal except under a complete mercurial course. As this was inconvenient, it was decided to dress the sore with mercurial ointment, and to give Plummer's pill at night, and iodide of potassium with sarsaparilla twice a day. He continued this treatment till the 20th of October; the greater part of the time being spent in a fine healthy spot in the moors of Scotland, and the patient leading a steady regular life, and not taking much exercise. When he returned from Scotland on the 20th October, the sore had extended, the edges were hard and more elevated, and the ulceration creeping under the skin in a semicircular form, healing a little in some places, but extending a little in others. I now recommended a more decided mercurial course; but it was agreed that it should be postponed for six weeks, to enable the patient to get his degree at Cambridge. In the mean time, he was to take the bichloride of mercury with sarsaparilla.

November 27. He returned from Cambridge, with the sore in about the same state as six weeks ago. He was now confined to the house, and commenced rubbing in a drachm of the strong mercurial ointment every night. As soon as the mercury affected his gums, which took place in a few days, the sore began to amend, and continued to heal steadily. It was healed in five weeks after the rubbing in was commenced; and some thickening of the cicatrix was removed by a continuance in the use of the mercurial inunction for a week longer.

St. Helen's Place, Bishopsgate, March 1851.

OBSERVATIONS IN REPLY TO DR. GEORGE GREGORY ON EXANTHEMATIC RELATIONSHIP.

By ALEXANDER KNOX, M.D., Physician to the Dispensary, Strangford, County Down, Ireland.

My attention has been drawn to two papers written by Dr. George Gregory, Physician to the London Small-pox Hospital, which were inserted in the *Medical Times* (on the 18th of January and 1st of March in the present year), on what he terms Exanthematic Relationship; but principally devoted to the criticism of my views on the subject of Vaccination, which first appeared in the pages of this Journal in November and December last, and have subsequently been published in an independent form. I should gladly have avoided any controversy on this subject; but as Dr. Gregory has specifically appealed to me for an answer, I comply with his demand, limiting myself, however, to a dispassionate examination of such scientific points as seem to require notice, and avoiding all comment upon the tone and manner which he has adopted in canvassing my opinions. I must premise, however, that I do not subscribe to Dr. Gregory's mode of stating my arguments; but prefer to be the exponent of my own views. It will therefore be necessary for me to rectify some misconceptions—I will not term them misrepresentations—into which he appears to have fallen.

It is admitted by Dr. Gregory, that the experiments of Mr. Ceely were considered by many as decisive of the question of the identity of cow-pock and small-pox; and that this doctrine therefore has of late been very generally conceded. The state of professional opinion on the subject is here, I apprehend, correctly stated, and I shall therefore content myself with adducing in its confirmation a single extract from the letter of a physician of long standing and much experience, which is now lying before me: "I did not suppose that any one was of opinion that variola and vaccinia were not the *self-same disease*, the symptoms of course being modified in the latter", etc., etc. But however others may think on the subject, Dr. Gregory's ideas, according to his own testimony, have undergone no change, and he still maintains unreservedly that the diseases alluded to are not identical. It therefore becomes necessary to examine a little the train of reasoning, which he has adopted in support of his view of the subject.

The first of his arguments to which we shall advert is, "that no direct experiments, as far as his observation extended, had proved that cow-pock can be communicated from man back to the cow." This was published in 1838; yet the experiments of M. Fiard had distinctly shewn, that retro-vaccination could be effected in 1825, as it had been in the beginning of the century, when vaccination was first introduced into France; and the fact had also been established by Valentin, Sacco, Frank, and other competent authorities. At any rate, the experiments of Prinz and several recent observers have established the point beyond controversy. This argument, at all events, has, we presume, been abandoned by Dr. Gregory, as we find him actually

contending for the superiority of the virus[1] "renovated by passing the vaccine lymph again through the body of the cow".

The next statement of Dr. Gregory requiring comment is, "that the doctrine of identity, or non-identity, does not, and never did, influence the belief in the virtues of vaccination". And he elsewhere asserts, that identity is "the groundwork of my faith, the pivot on which my reasoning turns", and "the polar star of vaccine pathology". In replying to these assertions, it is necessary to shew, in the first place, that Dr. Gregory has not fairly stated the argument which he professes to answer; for he would make it appear, that the doctrine of identity constitutes my chief ground for belief in the protective influence of vaccination. But on reference to my papers,[2] it will distinctly appear, that my arguments are grouped as follows: 1. Popular experience, as to the immunity enjoyed by those who have casually contracted Cow-pock from the cow, horse, or camel; 2. The identity of cow-pock and small-pox *an argument in favour* of the protective influence of vaccination; 3. Testimony in favour of the protective influence of vaccination; and, finally, evidence as to the actual results of vaccination, which I have in terms stated "*to be the most satisfactory, and after all, the only conclusive method of determining the true value of cow-pock.*"[3] And again, at page 24, it is distinctly stated, that the protective influence of cow-pock has been advocated on the following grounds: 1. The power which it confers of resisting the contagion of the casual disease; 2. Of resisting the effects of variolous inoculation; 3. Of resisting the effects of re-vaccination. This explanation will enable the reader to judge whether I have good reason for preferring to be the exponent of my own views. But although identity is not the "groundwork of my faith", I still continue, with great deference to Dr. Gregory, to look on it as a strong corroborative argument in favour of the protective influence of vaccination; and until he shall point out some disease which, by its passage through the system, prevents the subsequent attack of another disease, I shall venture to maintain, that the disproval of identity would fairly tend to shake our confidence in the defensive power of vaccination. But as far as the opinion goes, that the result of experience is the best proof of the protection afforded by cow-pock, there is no difference of opinion whatever between Dr. Gregory and myself. His whole argument is, therefore, merely an *ignoratio elenchi;* but if he assert that the proof of the doctrine in question may not be strengthened by corroborative arguments, there we unfortunately disagree.

But to pass on to another point of Dr. Gregory's criticism, regarding the pustular character of cow-pock, it is necessary to shew, in the first place, that, by quoting a part only of my statement, and placing another part in italics, a meaning is conveyed different from what I have really expressed in the original. The quotation to which I allude is this, "although cow-pock is considered rather a vesicular than a pustular malady, the vesicle becomes turbid towards the close, *and actually secretes genuine pus. Such is the usual progress of the genuine cow-pock.*" By this partial quotation and typographical device,

[1] Medical Times, March 1, 1851.

[2] London Journal of Medicine for 1850, p. 1044 et seq.; and Pamphlet, p. 10 et seq.

[3] Ibid., p. 1138; and Pamphlet, p. 20.

it is made to appear, that the last quoted clause refers exclusively to the progress of the vesicle; whereas a glance at the original in my pamphlet (page 14), will shew, that it has reference to the entire preceding description of the phenomena of cow-pock. As I should be very sorry to accuse Dr. Gregory of intentional misrepresentation, or of want of candour in stating the arguments of an opponent, I shall set down this misconception also simply as a mark of the haste with which he has evidently written. But still we are directly at issue, on the point as to the secretion of pus in cow-pock; for, although he qualifies his objection by stating, that he has not met with this as the *normal* character of cow-pock (he does not say that he has never met with it), yet he expressly affirms, that one of the essential differences between cow-pock and inoculated small-pox, is the invariable tendency to pustulation of the latter, and the truly vesicular character of the former. And he adds, "if I saw the genuine cow-pock secreting genuine pus, I should very soon become a convert to Dr. Knox's theory of identity; but, as I do not see the fact, I may be excused for demurring to the theory founded on it". Here I may be permitted to state, that the theory, whatever confirmation it may gain from the fact to which Dr. Gregory alludes, is not founded on it; it has other and much more substantial foundations—but let this pass. It cannot escape notice, however, that the other arguments adduced by Dr. Gregory against the doctrine of identity cannot have any great weight in his own mind, as he candidly enough admits, that if he were satisfied as to the correctness of my statement on the last mentioned point, he should soon adopt the theory which I have advocated. It appears of consequence, therefore, to examine for a little the question at issue, which is one of fact. The result of my own observation is explicitly stated in the quotation above alluded to, viz., that "although cow-pock is considered rather a vesicular than a pustular disease, the vesicle becomes turbid towards the close, and actually secretes genuine pus"; a description which, with equal correctness, might be applied to small-pox; for it first secretes lymph, and subsequently pus. No doubt there is usually a difference as to the quantity of the purulent matter, but this does not invalidate the truth of the general description. So far, therefore, from seeing an essential point of difference between the two forms of the malady, in the character of the secretions of the pock, I should refer to their similarity in this respect, as an additional proof of their identity, were additional proof wanted of a fact, demonstrated, as I conceive, by direct and conclusive experiments. As I do not, however, feel disposed to place my humble and unaided testimony in direct opposition to the high authority of Dr. Gregory, I shall here briefly refer to a few out of many distinguished writers, who concur with me as to the characteristic secretion of the cow-pock. Not to mention that Schlesier, Heim, and perhaps the majority of writers, employ the term pustule in speaking of the cow-pock, I find that Jenner, long since, was not singular in pointing out the close resemblance of the vaccine pustules, in certain stages, to the pustules of small-pox; for Soemmering, and C. L. Hoffmann, certainly no inaccurate observers, have made the same observation. A clever anonymous writer, in the *British and Foreign Medical Review* (No. xvii, p. 94), thus states the point in debate. "The lymph, though

at one time thought to retain its transparency uninjured, is said to become turbid and puriform after the full development of the pustule". Dr. Mason Good, likewise, in his description of the natural form of cow-pock, or as immediately received by milking, expressly asserts that the fluid, at first limpid, afterwards becomes opaque and purulent. And Dr. Elliotson, who it is presumed will be considered a competent authority, in speaking of vaccinia, says that, "although there are only vesicles at first, the contents become so turbid, that at last there is *genuine pus*". The testimony of Cazenave and Schedel is to the same effect; "le fluide contenu dans la vesicule devient purulent", etc. But it is unnecessary to accumulate further testimony on this head, as the question, after all, is one of fact, which the reader, as opportunity may occur, can determine for himself; and in which he would receive much assistance from the minute description of the morbid anatomy of small-pox, written by Petzholdt. Dr. Gregory has further expressed his utter inability to understand the passage in which I have stated, that in general the character of the malady has been rendered infinitely milder by its transmission through the cow. Now if he will compare the characteristic features of small-pox with the symptoms which follow the disease produced by the lymph derived from a cow, after inoculation with small-pox matter, I think he will not be at any loss to comprehend my meaning.

Again he questions, but hesitatingly, and with more caution, my reference to the occasional severity of the cow-pock occurring in the cow: not venturing absolutely to deny the severity of the epizootic which occurred at Moorshedabad, he contents himself with stating, that I ought to be aware how much doubt hangs about these cases. But experience might have taught Dr. Gregory, that to throw doubt or discredit on facts that come in the way of a favourite theory, although an easy, is not in the end a very successful mode of controversy. At one time Dr. Gregory maintained, as we have already pointed out, that no distinct experiments had proved that cow-pock could be communicated from man back to the cow. And he further asserted, that the experiments of Dr. Sonderland, and others instituted in Egypt, which shewed the practicability of transferring small-pox, from man to the cow, were "incorrect, if not altogether fabulous". Would Dr. Gregory make the same assertions now? We presume he would not; but, at all events, he can no longer repeat the assertion, that "the theory which would explain the preservative power of the cow-pock, on the principle of its being small-pox, which, in passing through the body of the cow, had become modified, is still unsupported by direct experiment." He may also probably have altered the opinion, "that the hope entertained by some sanguine physiologists, that, in the possible loss of the present stock of cow-pock, small-pox might be made to furnish its antidote, is altogether illusory." But that this hope is not illusory, has been proved by the experiments of Thiele, Ceely, Estlin, Badcock, and others; for many thousand persons have been successfully vaccinated with the lymph taken from cows inoculated with small-pox matter: indeed, the point has been conceded by Dr. Gregory himself, who states, that he would as soon use vaccine virus, generated in the cow by the inoculation of small-pox matter, as that which arises in the cow spontaneously. Mr. Badcock alone, whose

persevering energy in elucidating the point under discussion is worthy of all praise, has kept up, during the last ten years, a succession of experiments upon more than a hundred cows, and has thereby not only supplied lymph to many other practitioners, but has himself vaccinated more than eight thousand patients, without a single failure. He therefore, justly in my opinion, considers the identity of the two diseases to be fully proved by his experiments.

Having thus far attempted to dispose of various objections, the next point which I shall briefly notice, is the allegation with reference to the grouping of the phenomena of inoculated small-pox in the tabular form, in my pamphlet (pp. 19, 20),—that all, to use the language of Dr. Gregory, is inaccurate. In criticising this part of my treatise, he says that the papula, in inoculated small-pox, is as much confined to the locality of the puncture as in cow-pock. Perfectly true, no doubt; but on reference to the fifth page of my pamphlet, it will, I think distinctly appear, that I was already in possession of this information. It is scarcely to be expected that the phenomena of a disease can be as minutely described in a tabular form, as in a detailed description, and I admit that the table in question might be more lucidly arranged; but I shall content myself with a simple denial of the assertion, that in drawing it up, I was influenced, even in the slightest degree, "to assimilate the course of cow-pock to that of inoculated small-pox." The clause "generally few in number", which I have used in the table, refers to the secondary eruption; and I have yet to learn that this secondary eruption, although frequently more diffused, may not be occasionally confined to the vicinity of the punctures. And with regard to the criticism on the statement, that the areola appears on the *ninth or tenth day*, and that, by the tenth day, the primary pustule is full of matter; if mistaken in this respect, I can at least allege that I am not solitary in the error, as I can show by appealing from the opinion of Dr. Gregory, writing hastily and captiously, to Dr. Gregory, writing in a calm and philosophic spirit. For, referring to his own description, I find it to run as follows. "The incision, when viewed through a glass, now appears surrounded with an infinite number of small confluent papulæ, which daily increase in size; on the *tenth day* an areola, or circle of inflammation, forms around the inoculated point, *now* distended with matter. This areola is irregular in shape, and in its progress becomes interspersed with numerous minute vesicles. And again, occasionally on the *seventh*, but oftener on the *eighth day*, rigors occur, accompanied sometimes with faintishness, sometimes with pain of the back, headache or vomiting. The patient complains of a disagreeable taste in his mouth, and the breath is offensive, after which the eruption shews itself."[1] Neither am I solitary in the opinion, that, as a general rule, there is no "secondary fever"; in confirmation of which I only consider it necessary to quote a single authority, that of Dr. Watson, who expressly asserts that it is "*generally slight, or wanting.*"[2] But it will probably be thought that enough has been said on this point.

I pass on to the criticism on my assertion, that "the deterioration of the vaccine virus is a mere hypothesis." In opposition to this

[1] Cyclop. Pract. Med., vol. iii, p. 750. [2] Lectures, 3rd Ed., vol. ii, p. 789.

view, the authority of M. Bousquet is quoted, in reliance on which it is asserted, "that the experiments performed in Paris, in 1836, most distinctly *proved?* that the lymph was improved most materially in all its characters". Now I am fully aware of the experiments referred to; and without questioning the facts, it is open to me to question the validity of the inferences which have been deduced from them. But having told his readers so much, Dr. Gregory might also have apprised them, that the greatest diversity of opinion prevailed amongst the members of the faculty, who witnessed the results of the experiments alluded to. Some of the members of the Academy took the same view as Dr. Gregory, and drew the conclusion, that the original lymph had degenerated, whilst others inferred, as I do, that the size and elevation of the pustules is no infallible criterion of the energy of the virus, and that much variety, in this respect, may be produced by peculiarity of constitution, the state of the atmosphere, and other causes, without attributing it to deterioration of the lymph. At the same time I am quite aware, and have expressly stated, that vaccine lymph may be deteriorated by ignorance or carelessness; but I repeat the statement, in full confidence in its truth, that it is a mere hypothesis to assert that any deterioration has taken place in its qualities, simply by transmission from person to person. I do not question the fact, that many imperfect specimens of vaccine virus may be found; but, on the other hand, I have no doubt, from the testimony which might be adduced, that lymph may be found in the most genuine form, although in continuous use from the time of Jenner. My opinion may be deemed of little weight on this point, as contrasted with the high authority of Dr. Gregory; but the statement of such observers as Dr. Watson cannot be lightly passed over; and we find this distinguished physician thus expressing his views on the point under discussion. "For one year I had a seat as the Senior Censor of the College of Physicians, at the National Vaccine Board, and I then had opportunities of satisfying myself that lymph, which had been transmitted without interruption from person to person, ever since the time of Jenner, continued to generate as perfect a cow-pock vesicle as at first". To adopt the language, therefore, of a clever writer,[1] "It remains, we think, still to be proved, that where all Jenner's directions have been attended to, the vaccine lymph has undergone the smallest deterioration". Were we even to admit that it has become effete or deteriorated, we do not believe that the proposal brought forward at one time to remedy this effect, by increasing the number of punctures, is founded on any substantial grounds; on the contrary, we look on it as altogether illusory, and we think it would require strong evidence to shew that ten, twenty, or even forty punctures, with imperfect lymph, would have the same preservative effect as a single vesicle produced by genuine virus. Before dismissing this part of the subject, I may be permitted to allude to Professor Hering's statement. This eminent writer informs us, that a very great variety of opinion exists as to the value of lymph produced by retrovaccination. Some believe, with me, that there is no difference in efficiency between it and that hitherto in use; others,

[1] Brit. and For. Med. Rev., No. xii, p. 494.

as Prinz and Bousquet, have come to the conclusion that its quality is improved by retransmission; whilst a third party, of whom Professor Ritter is one, are of opinion that it is less active than virus of spontaneous origin. Under such circumstances it is not reasonable to expect that a dogma, emanating even from the highest authority, will pass unquestioned.

But it has been asked why, if the two diseases are identical, so many cases of small-pox occur after vaccination, and only an infinitesimal proportion after a primary attack of the casual disease? Were the fact really as stated, it would be a sufficient reply to contrast the immense preponderance of the vaccinated, in point of numbers, over those who have the disease in the casual form. It is therefore not sufficient to shew, that the absolute number of recurrent attacks is greater after vaccination than after casual small-pox; to give any force to the objection we are discussing, it should further be clearly shewn that the relative proportion also is in the same circumstances greater. In short, it seems to come to this, that cases of small-pox, after small-pox, are less numerous than after vaccination, simply because the primary cases of casual small-pox are also infinitely less numerous than cases of vaccination. There is also another source of fallacy in drawing a conclusion, which should be pointed out. Many of these alleged cases of small-pox occur after *imperfect* vaccination; and are therefore, in reality, primary, and not recurrent attacks of the disease.

After writing thus far, I have read in the *Medical Times* of the 8th, and the *Dublin Medical Press* of the 12th of March, some observations of Dr. Gregory on the subject at issue, which, if correctly reported, seem to demand a passing observation. They arose out of a report of some cases of recurrent small-pox read at the Royal Medical and Chirurgical Society, on the 25th Feb. last, by Dr. Webster and Dr. A. P. Stewart. In one instance, although vaccination and revaccination had been practised, and, in others, though the patients had previously had small-pox in its natural form, yet the disease recurred a second, and in one instance a third time, and proved fatal. The cases alluded to are very interesting, and, in my opinion, strongly corroborative of the views expressed in my pamphlet (p. 38), that the constitutions of certain individuals are "absolutely beyond the influence of any protecting agent whatever".

Many of the failures of cow-pock are thus readily susceptible of explanation; for, in these instances, although vaccination did not protect the patient, a previous attack of the casual disease was equally unsuccessful in preventing its recurrence; and in one instance, as already stated, even a second time. In the course of the debate that took place, it appears to me, that the reference of Dr. Mayo to the epidemic of small-pox in Edinburgh, in which the disease was *remarkably more fatal among the inoculated* than the vaccinated, constituted a very satisfactory reply to the dogma of Dr. Gregory; "that inoculation imparts full protection, whilst vaccination does not protect, except up to the age of puberty." Possibly, however, his opinion may not have been correctly reported; but if it has, on this point at least, "his ideas have not remained unaltered"; for elsewhere he has stated, that "permanent security is the *law* of the animal economy, and *temporary*

security the exception".[1] And I think it will be found on investigation, that Dr. Gregory's allegation, that modified small-pox occurs only in grown up persons, is equally irreconcilcable with the facts of the case. Wendt, and several other writers, mention instances where the disease took place before puberty; and Dr. Snow's experience is to the same effect. Dr. Thomson found the modified disease to occur at every period after vaccination. In my own practice I have met with at least two unequivocal cases; the patients being in the ninth or tenth years of their age. Of two practitioners, of extensive experience and sound judgment, whom I have consulted on this very point, one writes, that "he does not remember to have met with a dozen cases of that disease (modified small-pox) under the age of puberty; and the other informs me, that, "with one exception, all the cases of modified small-pox, occurring after vaccination, which he had met with, took place before the age of puberty, the entire number not exceeding twenty". I could produce much more evidence on this point, if more were required, to shew that the *ipse dixit* of Dr. Gregory is absolutely erroneous.

Some of the statistical information, brought forward in the course of the debate alluded to, satisfactorily confirms the great value of vaccination; and the results afforded by the epidemic, referred to by Dr. Mayo, would even go to prove that vaccination, as a measure of protection, is superior to inoculation. But without going this length, if it be only equally defensive, its superiority, on other grounds, cannot be questioned; and, as I have elsewhere stated, "it is not reasonably to be expected, that cow-pock, formerly believed, and more recently proved, to be in itself only a modified form of small-pox, should impart any greater amount of protection than the more severe form of the malady" (Pamphlet, p. 38); an opinion which, I am gratified to find, has the support of so distinguished a physician as M. Chomel.

But there is another point on which it would appear that the ideas of Dr. Gregory have not remained unchanged. At the debate in question, he is reported to have said that "he regarded re-vaccination as nothing more than a means of satisfying the patient; it had no real preventive influence". This appears to be the opinion of Dr. Gregory in 1851. But that it was not so some years ago, will clearly appear from the following quotation: "The practice is one from which no harm and much benefit may be expected. If no effect follow, the security of the patient is rendered doubly sure. If vesicles arise, and the disease goes through all, or some part of its usual course, that security may be reasonably considered as renewed." As I have, in the essay which is the object of Dr. Gregory's criticism, fully explained my own views as to the value of revaccination, it is not necessary to restate them here. It would, however, be satisfactory to learn on what sufficient body of statistical information Dr. Gregory has so completely changed his opinion; and the production of the necessary evidence might moreover tend to restore confidence in his authority on such questions, which must necessarily be shaken by discrepancies of opinion so glaring as those alluded to.

I have already referred to Dr. Gregory's scepticism regarding the nature of the disease prevalent amongst horned cattle at Moorshedabad

[1] Cyc. Prac. Med., vol. iv, p. 414.

in 1825. In that scepticism I do not concur; but supposing it to be well grounded, there is no lack of other evidence, probably sufficient to satisfy every unprejudiced enquirer of the occasional severity of the disease amongst animals of that class. In the variolous epizootic occurring in Bengal, which is referred to in the appendix to the second volume of Baron's *Life of Jenner*, it appears that extensive inoculations from the diseased cows produced not the mild vaccine vesicle, but an *eruptive malady of the true variolous character*. Still later, Mr. Wood, in Corbyn's *India Journal* (March 1838), details several cases, in which lymph taken from the cow produced a disease of an eruptive character, so severe, that he even goes the length of saying, that variolous inoculation at such a time produces a safer disease than vaccination.[1] Various other severe epizootics, occurring at different eras, are on record, as the pestilential eruptive disease described by Dr. Layard in the *Philosophical Transactions* (1780), which ran its course in Holland and Flanders; that which prevailed in Picardy, recorded by Vicq d'Azyr; to which we may add the cases occurring in 1825, narrated by Dr. Baron, on the report of Mr. Tiley, in the first volume of the work already mentioned.

Before the publication of the experiments of Ceely and some others, many writers, though strongly convinced of the identity of small-pox and cow-pock, candidly admitted that a link was wanting to render the chain of evidence complete; and even Dr. Gregory, then writing more cautiously than now, was evidently fully aware of the nature of the conclusion to which such experiments, if successful, were plainly calculated to lead. Having endeavoured to throw discredit on the researches of Sonderland and others, we find that, on the very ground of their alleged want of success, he drew the inference, which will be best stated in his own words: "It remains *therefore* a very *questionable* point, whether these disorders can be essentially the same." And now when the experiments of Thiele, Badcock, Estlin, and Ceely, have rendered it impossible to deny, or even to question, the practicability of transferring the small-pox to the cow, Dr. Gregory's ideas, whilst all others around him have been convinced, still remain unchanged. And what his ideas on this particular point were, he has left no room to doubt, for he has stated in terms, that "*cow-pock and small-pox were as essentially different as small-pox and measles*". Admitting now, as I believe Dr. Gregory does, the facts so clearly elucidated by Ceely and others, he still denies that they warrant the conclusion generally drawn, viz., that cow-pock *implies the same thing*, or is *identical with small-pox;* and it therefore becomes necessary to inquire in what manner he attempts to explain the experiments alluded to, since the actual results have been established beyond the reach of cavil. This explanation I shall give in his own words. "I affirm that one malady is capable of producing or developing, by inoculation, in an animal of a different kind, another malady of an *allied* nature, but still specifically distinct." But affirmations, unsupported by facts, go for little in the present day. To give any weight to his theory, Dr. Gregory should have specified some diseases which, being transferred from one

[1] See Dr. Baron's Letter in Brit. and For. Med. Rev., No. xiii, pp. 295-6-7.

animal to another, produce other diseases specifically distinct in their nature. For our part, we profess our total ignorance of any such diseases. It is sufficiently established by the writings of Elliotson and Rayer, that the virus of glanders will communicate a disease from the horse to man, but it has never hitherto been maintained, as far as my information extends, that the disease thus transmitted is not glanders, but one, to adopt the definition of Dr. Gregory, of an allied nature, but specifically distinct. Hydrophobia is another disease transferable from the dog and other animals to man; but the latter, when thus infected, has been always hitherto at least believed to labour under veritable hydrophobia, and not under a specifically distinct disease. But Dr. Gregory attempts to support his theory by reference to the variola ovina, the sheep-pox of these countries, and the "clavellée" of our continental neighbours. Now even assuming all the facts on which his reasoning, as regards sheep-pox, is based, to be true, there is little if any weight as affecting the identity of the diseases; and that little has been sufficiently disposed of in a letter, signed "Inquisitor", in the *Medical Times* of the 15th of February last. But several of the assertions relied on require further investigation before they can be admitted into the class of facts. When Dr. Gregory has supplied the necessary evidence on these points, it will be soon enough to reason on them; for the present, therefore, I shall content myself with enumerating a few of the assertions to which I have alluded as requiring confirmation.

1. That "these disorders of the horse and cow, respectively, are *always* mild or benignant disorders". 2. That the "sheep-pox is the offspring of an allied miasm". 3. "Matter taken from a sheep affected by this disease, and applied to man, appears as cow-pock; but vaccine lymph, taken from the cow, has no effect on the sheep, nor has the sheep-pox the property of affecting the horse or cow." 4. "It does not appear that human vaccine will affect either the horse or sheep." 5. We have "the acrid miasm of the sheep producing a mild disease in man". This last assertion has, no doubt, the support of Sacco; but Ceely, Marson, Simmonds, and Hurtrel d'Arboval, have been led by experiment to a directly contrary conclusion; viz., that ovination will not communicate the disease to man, either in a *mild* or acrid form, as appropriately pointed out by "Inquisitor", the writer already referred to; who has also saved me the trouble of examining, at length, the vague and irrelevant chemical analogies by which Dr. Gregory labours to give support to his theory. But, before leaving this part of the subject, I shall just refer to one passage in Dr. Gregory's first communication, as a specimen of his manner of elucidating his theory.

"It requires no great stretch of imagination to conceive, that the primary exanthematic miasm, so largely disseminated throughout the animal kingdom, is composed of two or three ingredients, which variously combined, appear in the several forms of small-pox, cow-pox, chicken-pox, sheep-pox, and equine grease; while the elementary changes convert the miasm into the parent of measles, scarlatina, the pestis bovina, and the canine distemper. Nay, it is further very conceivable, that cholera, the dreaded Asiatic pestilence, is an offshoot of the same miasmatic root, which, mollified by the lapse of

ages, may at length display features which will give it rank amongst the exanthemata."

It will scarcely be expected that I should offer any observations on such conceptions of the imagination as these, and they may very safely be left to the disposal of the professional world. Indeed, fancies so wild seem better adapted to an age when it was a serious subject of debate, whether one of the French kings should be bled on the right side or the left, than to the present enlightened era.

But further on, Dr. Gregory describes the small-pox and cow-pock virus as being also generically allied, but specifically distinct; and he winds up his theory by a quotation from M. Bosanquet, with reference to the identity of the diseases: "Il n'y a pas entre elles identité de nature, mais il y a reciprocité d'action." And this is Dr. Gregory's mode of explaining the lucid, beautiful, and conclusive experiments of Ceely. Calculated, as they seem to be, to demonstrate to every impartial mind that cow-pock and small-pox are essentially the same disease, to Dr. Gregory they only prove, that they are not identical, that they are generically allied, but specifically distinct, not possessing identity of nature, but reciprocity of action!

Dr. Gregory has further attempted to show that the non-identity of the diseases in question may be proved by a strictly logical inference, and his syllogism is thus expressed: "Identity means sameness; if they are the same diseases, they cannot have differences; but cow-pock and small-pox have differences, and therefore they cannot be identical." But this mode of arguing would manifestly prove a great deal too much. For instance, mild and malignant cases of scarlatina have very obvious differences, and therefore accordingly they cannot be identical. But to take an example still more to the point. Casual and inoculated small-pox have unquestionably differences, and if we were to adopt Dr. Gregory's syllogistic argument, they cannot be identical; and yet in both these instances, I feel satisfied that Dr. Gregory will assent to the identity of the maladies referred to. This style of argument is certainly puerile enough; but as I should be sorry to accuse Dr. Gregory of quibbling, it is manifest that if he is in earnest here, he overlooks a fallacy, which even the merest sciolist may detect.

Having thus passed briefly in review the comments of Dr. Gregory, I do not think it necessary to restate here the arguments on which I have urged the identity of small-pox and cow-pock. I shall therefore content myself with repeating in very few words, the sum of my belief on this head. When small-pox virus, taken from the human subject, produces by inoculation a specific disease in the cow, I maintain that the disease thus produced is small-pox; and when this disease is retransmitted by vaccination to the human subject, I believe that the resulting malady is, *ex necessitate*, small-pox also. These inferences, it appears to me, are strictly deducible from the experiments of Badcock, Thiele, and Ceely, and it must be left to the professional reader to contrast them with the theoretical explanation of Dr. Gregory, "that one malady is capable of producing by inoculation, in an animal of a different kind, another malady of an allied nature specifically distinct, not possessing identity of nature, but reciprocity of action". I of course admit, and have distinctly pointed out, the modifications to which the disease is liable;

but I do not admit that these are of such a character as to afford any valid argument against the identity of small-pox and cow-pock. I fully concede that various circumstances may modify the phenomena resulting from the transmission of the small-pox virus; but *I do not admit that any circumstances can destroy its identity, or confer on it the power of producing any other disease than small-pox.* I therefore feel constrained altogether to refuse my assent to the affirmation of Dr. Gregory, that one malady is capable of producing in an animal of a different kind, another malady specifically distinct. On the contrary, after deliberate reconsideration of the whole subject, I think the facts warrant me in supporting the views expressed in the petition to Parliament, emanating from the Provincial Medical Association, viz., that the cow-pock is "an affection of a true variolous character, demonstrated by historical evidence, as well as by direct experiment, human small-pox having been recently communicated to the cow by inoculation, and the result having been the production of a variolo-vaccine lymph, possessing all the properties of the original vaccine disease."

In conclusion I have only to state, that the discussion, in which I have been reluctantly engaged, was forced upon me. Although necessarily commenting freely on the views of Dr. Gregory, where I believed them to be erroneous, I have passed by many points, in his hasty effusions, which appear open to objection. My sole motive, in writing on the subject, has been to advocate, at an appropriate time, views which I consider to be true, and which I believe deeply to affect the social welfare. And although I have the misfortune to differ with Dr. Gregory, whose authority generally I respect, and have shewn no wish to underrate, yet many letters, now lying before me, encourage me in the belief that I have neither erred in the views which I have adopted, nor in the time selected for their advocacy.

Strangford, Ireland, March 1851.

BIBLIOGRAPHICAL RECORD.

General Pathology, as conducive to the establishment of Rational Principles for the Diagnosis and Treatment of Disease ; a Course of Lectures, delivered at St. Thomas's Hospital, during the Summer Session of 1850. By John Simon, F.R.S., etc. pp. 288. London : 1850.

Our readers are doubtless in some measure already acquainted with the contents of these Lectures, seeing that they first appeared in the pages of the *Lancet*. We are, however, tempted, in spite of this, to bring them again somewhat prominently forward ; and in so doing, we bear the strongest possible testimony to our sense of their value and importance.

The First Lecture is of an introductory character. In it Mr. Simon labours strenuously with the difficulties of definitions. We shall not follow him in his struggles. What he says, he says well, and very much to the purpose ; but agreeing with him, as we do, that a matter admits of philosophical definition only when its investigation has been completed, which is very far indeed from being the case with the science of pathology, we hold ourselves fairly exonerated from the trouble of striving after the unattainable.

The Second and Third Lectures are devoted to the examination of the Condition of the Blood in Disease ; a subject, the importance of which it is scarcely possible to over-estimate. Moreover, it is a most intricate branch of the inquiry, for, as Mr. Simon most correctly observes : "A chief difficulty in the study is this ; that the blood undergoes changes of its own—undergoes what I can hardly call anything else than a process of growth. In addition to receiving new matter from the food, and old matter from the tissues,—in addition to feeding the several organs, and supplying the several excretions of the body, it does also itself undergo, as I have said, progressive changes of its own, analogous to the growth of the solid tissues. For the new materials which are derived to it from the food are not *blood* at the time of their addition ; they are crude, immature products, which subsequently ripen within the stream of the circulation, under the influence of the maturer blood, and conformable to its composition. To some of you, perhaps, the view here suggested, of the blood undergoing development akin to growth, may be new and strange. There is an early prejudice, which makes us consider solidity of structure an indispensable preliminary for the residence and manifestation of life. Still, in spite of that prejudice, and in spite of the fluidity of the blood, you may safely believe that that red fluid is a living, growing mass ; that the process of blood-formation is not the mere infusion of certain ready-made materials from without, but is as truly a process of growth as the development of cartilage or muscle.

"If the power of resisting change—if the power of converting things to its own type, and perpetuating its own constitution—be signs of life in an element or portion of the body, I know none which possesses these qualities in a higher, if in so high a degree as the blood. And further, in recalling its anatomy, you will be confirmed in this view. You will remember, that in all other elements of the body, the abundance of cell-development which you meet with, measures the activity and constancy of growth ; and if you put a drop of blood under the microscope, and compare it with a patch of equal size of liver, or of brain, you are at once enabled to judge how immeasurably greater is the developmental activity in the blood ; or if you look at a drop of fluid from the thoracic duct, you observe myriads of cell-germs there—germs which it is the chief, and perhaps the only, object of the lacteal and lymphatic systems to provide, and which attain their maturity, and fulfil their purpose, only when received into the blood. And not only does the blood live and grow ; but, in the mature animal, its life and growth must

precede all other life and growth in the body ; for first *it* grows, next other organs grow at its expense." (pp. 21, 22.)

Besides this, the rapidity with which changes in the blood occur, and the complex nature of the fluid itself (containing as it always does imperfectly formed particles, particles fully developed, and particles worn out by use), add greatly to the difficulties which beset our path.

In following out the subject of blood-diseases, our author examines, *first*, those which depend on morbid ingestion ; *secondly*, diseases depending on increase, arrest, or alterations of the excretions ; *thirdly*, diseases depending on modification of the blood's own growth and development.

The *first* are illustrated by the action of *poisons*. The *second* are exemplified by the *retention* and *accumulation* in the blood of matters which ought to be excreted, as carbonic acid, bile, urea ; and by the alterations produced by certain new, artificial, or otherwise abnormal excretions, such as the *inspissation* which results from the excessive discharges of cholera, and the *attenuation* following upon hæmorrhages, protracted suppurations, etc. The *third*, which may be considered as primary diseases of the blood, are examined at considerable length. The *corpuscles* may be proportionately increased, which is the condition in plethora ; or diminished, as in chlorosis. The *serum* may be altered in regard to the respective quantities of salts and albuminous elements, and probably the changes here are the most important of all, though our knowledge of them is not as yet very precise. Among the most common, and at the same time most interesting of these, are the variations in the quantity of *fibrin*. Mr. Simon inclines to the view adopted by Zimmermann and a few other physiologists, that the fibrin, instead of being the nutritive element in the blood, rather occupies the same position as the extractive matters, and, like them, is the result of decay of the blood itself, or of the waste of the tissues. We conceive that this view is quite untenable. If it were true, how are we to explain the well known fact, that the quantity of fibrin is greatest in the chyle of the thoracic duct, having appeared gradually during its progress from the lacteals ?

Be this as it may, many evils result from the presence of an excess of fibrin in the blood. Among these, Mr. Simon mentions the existence of fibrinous concretions in the spleen, the kidneys, and the liver ; and he attributes to the same cause the occurrence of vegetations on the cardiac valves, which are so frequently found in cases of acute rheumatism, and are generally attributed to endocarditis.

" As the question ' How do these valve-diseases originate ?' is one of the greatest practical importance (for it must materially influence the method of treatment), I shall enter at length upon the theory of their formation.

" The general opinion, which till very lately has been unquestioned, is, that the lining membrane inflames, and pours out lymph (just as the pleura or pericardium might do), and that thus these vegetations are true *excrescences*, which have arisen in an inflammatory exudation.

" Now here, on the threshold of the subject, a doubt occurs—Is the lining membrane of the arterial system susceptible of inflammation ? ' Inflammation,' in the language of the schools, ' consists in an increased action of the blood-vessels of a part.' Without pledging ourselves for the accuracy of this definition, we may use it in the present instance as a rough criterion of inflammation ; at least negatively. No part can be said to inflame, in the ordinary sense of the word, which has not vessels of its own. You cannot talk of inflammation of the hair or nails. What, then, are the bloodvessels of the lining membrane of the arterial system, which this theory supposes to be the seat of an increased action ? That portion of an artery which we term its inner coat has no bloodvessels of its own, nor do those of the middle or contractile coat (which are derived from the so-called *vasa vasorum*) penetrate to a sufficient depth to influence materially (if at all) the nutrition of the lining membrane.

"In the Museum of the College of Surgeons there is a preparation of Mr. Quekett's (an injection done, as all Mr. Quekett's are, with admirable success), which shows how very much the *vasa vasorum* fall short of reaching the lining membrane of the artery. And—if you will but think for a moment, what should *vasa vasorum* do there? what could they convey more fit for the nutrition and growth of the membrane than what is already there?—than that blood, namely, which is already washing over it incessantly and profusely.

"And again, gentlemen, reflect on this: the lining membrane of the artery and of the valves has an epithelium; wherever epithelium grows, the old cells drop off in a direction opposite to that whence the new ones derive their materials of growth. Just as our scales of epidermis drop from the surface of our bodies, being nourished and renewed from within; just so, if the epithelium of an artery were renewed from without (i. e. by *vasa vasorum*), the old scales, as fast as they became detached, would drop into the interior of the vessel; and though, no doubt, their decay is very slight, and the number that might thus pass into the circulation, and presently obstruct the capillaries, would be very small, still it would be essentially a clumsy arrangement.

"From a variety of reasons, it seems almost certain that the ordinary nutrition of the lining membrane of the circulating system is derived directly from the blood with which it has contact; and that its morbid changes depend—not on any inflammatory condition due to the *vasa vasorum*, but on those humoral changes, those variations in the qualities of the blood, by which it is more immediately and more certainly affected than any tissue of the body.

"On these grounds there would be great *primâ facie* difficulty in believing that the endocardial deposits could be of inflammatory origin. But this is not all; for, if they were inflammatory exudations, why should they be so peculiarly limited to projecting or uneven surfaces of the lining membrane? And why should they evince so decided a preference for the *left* side of the heart? Both sides of the heart, and all points of each cavity, are (one would think) equally exposed to the causes of inflammation; the coronary arteries supply both ventricles of the heart indifferently, and we well know that acute *peri*-carditis pays no respect to the grooves and septum of the heart; it traverses all such lines of demarcation, injects the bloodvessels of right and left side alike, and covers ventricles and auricles equally with its dense inflammatory exudation. On the supposition that these vegetations are inflammatory effusions from the membrane, I should be quite unable to explain why they should almost entirely confine themselves, as they do, to the valvular apparatus; and why their predilection for the left side should be so great, that the right is very rarely affected—perhaps never, except where the left has first suffered, and where the disease has been of such extreme intensity, that even its weaker affinity for the right side has been able to manifest itself.

"The opposite doctrine is the more tenable one. I believe that the origin of these vegetations is directly humoral; that they arise as fibrinous precipitations from an overcharged solution; the valves encrusting themselves with fibrin, just as a stick in certain streams coats itself with a calcareous envelope; and that the preference shown for the left side of the heart admits of explanation by reference to the peculiarities of its contents—the new-made arterial blood.

"You will observe that this theory involves the supposition, that arterial blood is more prone than venous blood to precipitate its fibrin, either as containing more of it, or as containing it in some more separable form.

"Not wishing to leave this a matter of uncertainty, I have experimented on the subject. I have carried a single thread, by means of a very fine needle, transversely through the artery and vein of a dog, leaving it there so

that it might cut the stream ; and I have done this repeatedly, sometimes in the femoral vessels, sometimes with the carotid and jugular, sometimes with the aorta and cava. I have suffered the thread to remain during a period of from twelve to twenty-four hours. My experiments have given me as a uniform result, that the arterial blood with the utmost readiness deposits its fibrin on the thread ; the venous blood with the utmost reluctancy. And in most of my experiments, the thread, where it traversed the canal of the artery, presented a very considerable vegetation on its surface (exactly like those we are talking of on the valves of the heart) ; a vegetation sometimes as large as a grain of wheat ; always of a pyramidal shape, with its apex down-stream, and its base attached to the thread. In the artery, one might say that the thread whipped the blood, just as one whips blood in a basin to get the fibrin out of it ; but with this trifling difference, that, instead of the rod beating the fluid, the fluid ran over the rod and precipitated its fibrin there. In the vein, the thread seemed to operate no way but obstructively ; never coating itself with fibrin, but sometimes delaying or stopping the circulation with a voluminous black clot, chiefly collected on that side of the thread remotest from the heart. Accordingly, the general statement and rationale of the matter appears to be as follows :—the disease in which these deposits are so frequent is one of intense over-fibrination of the blood, and one in which almost certainly there are other conditions, besides *quantity*, making the fibrin easy of precipitation ; the left side of the heart has preference, because it is the arterial side, and because arterial blood, as we have seen, readily parts with its fibrin ; the valves, and particularly their stream-ward surfaces, are chosen for the deposit, because their position exposes them chiefly to the friction of the current ; so that the whole curious selection of site for the deposit resolves itself into the concurrence of two conditions, which are fulfilled in that one spot of the vascular system—namely, the greatest chemical tendency to the deposition of fibrin, with the greatest mechanical facilities for its entanglement.

" In introducing this subject, I mentioned that it is one of great practical importance. Many people bleed locally, or even generally, when they hear an endocardial murmur arising in the course of rheumatic fever. In their eyes, the new disease is endocarditis ; and everything ending in *-itis* is thought, in at least a majority of instances, to be benefited by bleeding. Therefore, gentlemen, do not be in a hurry to call it endocarditis ; and, as for bleeding, all that I would venture to say (for of course the treatment of this physician's disease does not fall within my province) is, to assure you of the pathological fact, that you may bleed a patient to death without altering (except probably to increase) the proportion of fibrin in his blood.

" I may mention, however, as of some pathological interest, that in a recent work on Diseases of the Joints, by a French surgeon of considerable experience (M. Bonnet of Lyons), a section is devoted to the treatment of acute rheumatism by nitrate of potass in large doses (up to an ounce or an ounce and a half per diem). He speaks of its utility in the highest terms, and he quotes with full concurrence a passage from M. Gendrin, who has likewise used the medicine very extensively, to the remarkable effect that this method of treatment possesses this among other advantages, that it prevents inflammation of the endocardium,—*il prévient les endocardites.* You will find an interesting paper, on the same method of treatment, communicated by Dr. Basham to the Medico-Chirurgical Society, and published in the last volume of their *Transactions.*

" Now we know that nitrate of potash is a powerful solvent of fibrin ; we know that in these large doses a quantity of it must be retained in the blood, and we are thus enabled to interpret the efficiency of the remedy in accordance with our knowledge of the disease. Nitre, if present in the blood in sufficient quantities, would prevent fibrinous concretions on the valves, by increasing the solubility of this material, and diminishing its liability to precipitation." (pp. 54-58.)

The subject discussed in the Fourth and Fifth Lectures is DERANGEMENTS IN THE QUANTITATIVE DISTRIBUTION OF THE BLOOD. *Hyperæmia* may be either passive or active. Passive hyperæmia results from mechanical causes impeding the return of blood from a part. The vessels are too full of blood, but of blood which has been already fully used, and is therefore not in a fit condition to minister to nutrition ; accordingly there is no over-growth consequent upon the repletion. But effusion very constantly results, and often gives rise to serious mischief. The fluid thus poured out is the *liquor sanguinis*, generally more or less deprived of its nutritive ingredients, the fibrin and albumen.

Active Hyperæmia is a very different process. It is not produced by mechanical impediments to the return of blood, but by causes which attract that fluid in undue quantities to any particular part. Mr. Simon regards molecular changes in the tissues as the primary step, and brings forward strong reasons for demurring to the opinion that an impression on the sentient nerves must precede the changes. Among other reasons, he adduces the following case, which we quote as being remarkably conclusive.

"A patient had complete anæsthesia of the fifth nerve, dependent (as a *post-mortem* examination subsequently showed) on its organic disease ; the conjunctiva, as well as the integument of the face, was utterly insensible ; not only was the function of the nerve destroyed, but those reflected nutritive changes of which I have already spoken had taken place, and had exhausted themselves ; showing that the nerve was spoilt for participation in the acts of nutrition (whatever they may be), no less than for its more obvious uses as a medium of conscious sensation : the cornea had undergone ulceration, and had healed again. The following experiment was carefully made. The lids being held open, a single granule of cayenne pepper was laid upon the insensible conjunctiva ; in a few moments it had become the centre of a very distinct circle of increased vascularity, the redness of which slowly became more and more distinct as long as the stimulus was suffered to remain ; so that, on its removal, there was a very evident circumscribed erythema on the surface of the membrane. I consider myself justified in believing that this change occurred without any intermediate nervous excitement ; not only because the history of the case would lead me to consider the fifth nerve as annihilated ; not only because the experiment was totally unattended with sensation, but likewise because there was the very remarkable absence of that sympathetic phenomenon, which the faintest remnant of nervous excitability would have produced—namely, there was not the slightest trace of lacrymation." (p. 76.)

But these molecular changes probably, in most instances, produce an impression on the nervous centres, from which, by a reflex action on the middle muscular coat of the arteries, relaxation of the vessels results, and thus an increased quantity of blood is conveyed to the part. If this increased supply can be all used by the tissues in their healthy workings, hypertrophy of the organ is produced. If the supply be greater than what can be thus employed, new products are evolved—cells or fibres, foreign to the healthy structure of the part. In this we have the distinction between hypertrophy and inflammation ; their general pathology has much in common ; their causes are often alike—their modes of production identical. But in hypertrophy, however large may be the supply of blood, it all goes to the true nourishment of the organ, goes to increase the number of its natural molecules ; while, in inflammation, all that is redundant goes to the formation of new products.

Atrophy is the converse of this. There is less blood than natural in the part ; and this diminished supply may either be caused by mechanical impediments to the current, or result from the want of attraction of the tissues themselves, as is seen in organs long unused. Both these conditions, hypertrophy and atrophy, are illustrated by numerous examples.

The Sixth Lecture is occupied with the Products of Inflammation. It is full of interest, and will well repay perusal, but is scarcely susceptible of analysis within moderate limits. In speaking of fibrinous effusions, Mr. Simon again dwells upon his peculiar views of the nature of that substance, and expresses his doubts of its tendency to become organised, believing that the instances generally adduced in proof are merely examples of the organisation of albumen, the true nutritive blastema which had been entangled in the meshes of coagulated fibrin. He regards suppuration as the natural end of inflammation, and considers that it is only to be avoided by arresting the progress of the inflammatory action, and thus preventing the completion of the natural steps. He believes that the new vessels which are found in inflammatory effusions, when they become fully organised, are prolongations of the vessels of the old tissues, not real new formations.

The Seventh and Eighth Lectures treat of Tumours. Mr. Simon first gives a general, and very graphic description of them, under the several heads of tegumentary, vascular, fatty, fibrous, cartilaginous, bony, cystic, and cancerous. He then, in a very interesting recapitulation, distributes them into four groups. 1. *Tumours by accumulated secretion*, such as encysted tumours of the scalp, simple ovarian cysts, bronchocele, etc. 2. *Hypertrophic tumours*, including the tegumentary and fatty, which are illustrations of partial hypertrophy, and the bony, as nodes and exostosis, which result from what he denominates adjunctive hypertrophy. 3. *Hypertrophic tumours with conversion of tissue*, as cartilaginous tumours connected with bones, or fibrous tumours of bones or cartilages. 4. *Eliminative tumours*, which include all the varieties of cancer. As the author's view of the nature of cancer is by no means common, we quote his reasons from the original.

"Finally, gentlemen, the difficult task remains to me of setting before you the pathological affinities and contrasts of *Cancer*. Let me remind you that I use the word generically; including under it the three species of which I have spoken, and taking the encephaloid form as its most perfect and characteristic illustration.

"Fix your attention, first of all, on the total unlikeness of cancer to any kind of tumour we have hitherto considered: observe how impossible it is to regard cancerous growths as accumulated secretion of any organ in which they arise, or as the results of its hypertrophy, either interstitial or adjunctive. They are distinctly new products—new developments of the organism; and they correspond to some new purpose. The evolution of a cancerous tumour in the body marks, I apprehend, a new state of things in respect of the patient's total organisation and vitality; just as much as the first acting of the kidneys in the embryo, and of the lungs in the infant, respectively mark new eras in the animal's progressive development.

"Thrust aside all the accidents and trivialities of the subject; strip the question naked; and what does a cancer mean? Substantially it is a new excretory organ. Under the pressure of some mysterious constitutional necessity, a growth arises, which (in its typical form) tends essentially to acts of eliminative secretion; just as distinctly as the healthy liver or the healthy kidney. You must not stop short at the *tumour*: you must scan the whole drama of the disease, in which the tumour forms but a pro-œmium. Look again at such a case as I gave you for illustration—a case of encephaloid manifested in the globe of the eye: that vast fungating ulcer which ensues on the protrusion of the tumour, and which continues hourly to purge forth its profuse discharge,—that is the real intention and purpose of the tumour, as palpably as urine expresses the intention of the kidney, or bile the intention of the liver. The cells of the tumour have grown like healthy gland-cells—like the nucleated cells of a mucous membrane, only to discharge themselves with their contents. There is nothing, I repeat, like hypertrophy in the disease: it consists essentially in the establishment of a new vent—a new organ of elimination; and that organ develops itself according to the

type of other secreting organs; it develops itself as an apparatus for the formation of deciduous cells.

"How constitutional—how intensely constitutional—is this eliminative action, can hardly be misunderstood. The mere fact that Nature thus (if I may say so) deliberately, and without any exterior provocation, organises in one spot of the body a drain which becomes so ample as to starve the remainder; the circumstance that this flux is not a single emptying out of some previous local accumulation (such as one sees in the pointing and discharge of an abscess) but is a persistent process, depending day by day on new acts of growth; the observation that the tendency to the disease is in many instances hereditary; the existence of a marked cachectical state which precedes, as well as accompanies, the evolution of the tumour; and, most of all, that flagrant evidence of metastasis[1] which daily renews itself for our instruction, consisting in the failure of surgical operations, by reason of the obstinate emergence of the disease, even again and again, in parts previously uncontaminated by its presence:—these arguments are to my mind as conclusive for the constitutional and purely constitutional origin of cancer, as any which I could adduce to show you the constitutionality of small-pox or gout.

"Thus much is beyond question. And, while I tell you that a cancerous tumour is an organisation for excretory purposes, I wish I could go further, and could explain to you what is that mysterious condition of system in which this eliminative effort has its root; what it is that enables and induces the blood thus to starve those various organs which are the natural claimants of its substance, and thus to waste itself in works of supererogation. We have seen parasites acting thus by the body; we have seen the blood involuntarily yielding up its richness to their extraneous suction. But here the case is quite different; the blood seems (if I may use the phrase) spontaneously and voluntarily, and under no pressure of local circumstances, to set about constructing an organ for the appropriation and discharge of its own blastema. It is from sedulous chemical investigations alone, that we can hope for light on this most difficult subject: from such investigations, I mean, as will compare the total chemistry of the cancerous body—blood, tumour, excretions—with the total chemistry of the healthy body; and especially will found themselves on an exact and comprehensive knowledge of those natural changes which occur in the progressive and regressive metamorphoses of the blastema of the blood. Hitherto the chemists have done nothing for us in respect of this disease; and till they have furnished us with the information just indicated, our hopes of cure must necessarily

[1] "I am content to rest my justification of the word "metastasis", on the habitual return of the disease after operations, even when they have been performed with the best apparent prospect of success. But a case is quoted, on the authority of Parent-Duchatelet, which looks more like what is generally recognised as *metastasis*, namely, that the disease spontaneously deserts one site, and simultaneously addicts itself to another. As a solitary instance, it adds little or nothing to the evidence of surgical practice; but I transcribe the case for its curiosity:—'A woman,—after having suffered for a length of time from a tumour in the breast, which possessed all the characters of non-ulcerated scirrhus, and after having presented the symptoms of cancerous cachexia in so marked a manner, that Dupuytren not only refused to remove the diseased organ, but dissuaded Parent-Duchatelet from the use of leeches,—was seized with remittent cephalalgia of intolerable violence; at the same the mammary growth ceased to be painful, and eventually disappeared almost completely. Apoplectic symptoms, with hemiplegia, supervened, were combated with the ordinary means, and recurred twice before the patient's death, which took place ten weeks after the first apoplectic seizure, and two years after the supervention of the symptoms in the breast. On *post-mortem* examination, a tumour of the size of a nut, and possessing (according to Cruveilhier) the characters of carcinoma, was discovered floating, as it were, in a quantity of diffluent brain.'"

remain dormant, or must content themselves with speculative and empirical endeavours. For pathology distinctly traces a chemical function in the disease, and shows that it is from the basis of chemistry alone that any rational cure of the disease may possibly be argued out.

" In the ground we have gone over, you will have seen what it is which constitutes the so-called *malignity* of cancer, and which assigns it a separate place and a higher importance in the list of morbid growths ; this, namely, —that the cancerous tumour is a mere symptom of constitutional disease, a mere phenomenon locally arising in a concentrated act of the entire system, as demonstrably and as simply as a paroxysm of gout is the local product and local evidence of a general disorder." (pp. 152-155.)

Scrofula is the subject of the Ninth Lecture. Mr. Simon very strongly, and we think rightly, insists upon the fact, that tubercle is the essential and diagnostic product of scrofula. He believes it to be strictly hereditary, and very difficult of artificial production. He does not absolutely deny that it may be so produced, but shows that it is much more rarely so done than is generally imagined, and that many of the recorded experiments are fallacious.

" Having spoken of experiments performed on the lower animals, I feel bound to caution you against a too implicit belief of all you may read in books as to the experimental production of tubercle. Statements on this subject have been made and disseminated too hastily. For instance, rabbits are cited by authors, as peculiarly prone to become subjects of the disease. 'A rabbit, fed in a damp, dark cellar, on watery vegetable food (says Mr. Phillips), soon becomes the victim of tubercular deposits.' There are certain influences (says Dr. Walshe) 'which experience has proved to lead unfailingly to the development of tubercle in the liver of rabbits.' Four or five years ago, when I was busy with experiments on this subject, I received from a friend the so-called tubercular liver of a rabbit ; the deposit was white, not very firm in any part, and in some spots diffluent ; it extended in several directions throughout the thickness of the organ, reaching its surface, and bulging it at various points ; but there was something in its appearance which struck me at first sight as unlike tubercular deposit ; it appeared continuous in lines, rather than in masses ; it seemed to branch, too, in the direction of the ducts, as though it were dependent on their anatomical arrangement. I proceeded to examine it with a high power of the microscope, and found, to my astonishment, that the whole mass consisted of the minute oblong eggs of some entozoon. The fact seemed likely to be of importance, and consequently I followed up the observation by others. On inquiry of a *candid* poulterer (for the sellers of eatable stock are naturally reluctant to admit the possibility of disease in their animals) I found that these 'tubercular' livers are common—very common ; that they will be found often in almost every tame rabbit cut open, and in litter after litter ; and, strangely enough, that they do not appear incompatible with good health, or at least with health sufficiently good for market purposes. Now, I examined dozens of these livers, always with the same result ; and I may mention to you, as of some interest in relation to the habits of the entozoon, that while engaged in these examinations, I found the same ova in the gall-bladder and in the whole length of the intestinal canal ; in several parts of the latter (as *e.g.* in the cæcum) I observed them actually following the inflexions of the mucous membrane, and lining its follicles almost like an epithelium.

" In continuation I made various experiments, to see if I could produce tubercle artificially, and various other examinations to see if I could find it in rabbits dying under other circumstances. The result may be told in a word : I have never seen tubercle in a rabbit. I do not wish you to infer from this, that rabbits are insusceptible of the disease ; my knowledge by no means extends to this ; there may have been some share of accident in my non-observation of tubercle among so many specimens ; and other more for-

tunate observers may have witnessed the disease, perhaps frequently. But what I would insist on is, that the artificial producibility of tubercular deposit is by no means the simple and straightforward process it is supposed to be. So far as the belief in it depends on such statements as I have cited to you, I feel bound to caution you against its reception; and I would even venture to say, that at the present moment the balance of evidence is against the supposition that tubercle can be produced in animals by any of the means which I have specified.

"For I may inform you in addition, that, not only in rabbits, but in sheep, and in cats or dogs which have been made the subjects of experiment, a very large proportion (I refrain from saying *all*) of the alleged tubercular deposits, artificially produced, prove, on careful examination, either to be instances of parasitic development in the substance of the lungs, or to consist of some other morbid product utterly unlike human tubercle." (pp. 166-168.)

Our author's general views are thus summed up. "The material products of the scrofulous diathesis consist in some mis-developed proteinous ingredient of the lymph and blood. The essence of this mis-development lies in the fibriniform solidification and concretion of something which should remain fluid in the plasma of the blood. I call it *fibriniform*, because—though it is not identical with fibrin, it probably arises in some analogous method of formation, and undergoes similar final metamorphoses. This solidification occurs in the ascensive development of the lymph and blood: it occurs with an infinite preference in the lymph-glands and in the lungs; in the former, where lymph is brought into intimate relations with arterial blood; in the latter, where lymph (which is constantly accruing to the blood) first comes into immediate relations with the atmosphere. It seems then to affect the total blood, only by reason of the lymph which is contained in it; in other words, not to be a disease of the total blood, but one of the lymph or nascent blood. Precipitability by the atmosphere is the characteristic of this morbid product; its places of election are determined by this peculiarity: tubercles form, where lymph and blood get their first opportunities of increased oxidation. In accordance with this law, venosity of the blood precludes the tendency to tubercular deposition. The fibriniform product of scrofula is insusceptible of development: it is a dead concretion. Like true fibrin, it may become the seat of calcareous deposit, and may thus form a permanent inorganic concretion. Like true fibrin, it chiefly tends to soften, and its softened substance is copiously infiltrated with fat: probably it undergoes a fatty degeneration. The diathesis in which tubercular deposits occur, is accompanied by a remarkable tendency to the accumulation of fat in the liver, and to the fatty degeneration—either of the substance of other organs, or of some previous infiltration in those organs: possibly this tendency may indicate that the fibriniform material of tubercle in its molecular state can undergo, either in the blood, or in those organs, the same degenerative changes as affect it in its concrete condition. In short, the scrofulous diathesis consists in an inherited peculiarity of blood-development, under the influence of which the nascent blood tends to a molecular death by super-oxidation; partly it may appear that these dead proteinous elements can undergo, within the stream of the circulation, such degenerative changes as will qualify them for discharge by excreting organs; partly it may appear that these changes lead to fatty accumulations in the endothelium or in the parenchymatous blastema of such organs; but mainly and characteristically, it is the way of those dead proteinous elements to concrete in the organs where their precipitation has been determined, and there to construct the fibriniform masses called *tubercle*. These masses undergo changes of deliquescence and destruction, which tend to their ultimate expulsion from the system, but which, as they entail the disorganisation of all surrounding textures by inflammatory and ulcerative processes, are commonly defeated in this tendency when they occur in vital organs (as the lung) or attain it

by the complete sacrifice of the invaded organ, as when present in lymph-glands, testicle, or breast.

"I have told you that cancer and tubercle are incompatible diseases—that the one excludes the other. You cannot wonder at this. They are pathological antitheses in regard of the blood. In the one case, if I may use so strong a phrase, the blood dies still-born; it never attains its maturity of growth or function; it stops short of the distributive arteries of the body; it never reaches the aorta; it perishes and decays on the threshold of the circulation. In the contrary case of cancer, there is an obstinate excess of vitality, which will not be quenched. You remember how the blood's plasma, as though out of a luxuriance of life, contributed—not to perishable concretions, but to profuse living growths; you remember how these growths, tending to an effort of elimination, still maintained an interrupted dependence on the blood, constituting the strange paradox of an organised excretion; you remember how they evolved themselves with exhaustive rapidity out of a too fructifying blastema, vegetating without limit at the expense of other organs, till the whole fluid of the circulation seems to devote itself, away from its slower and legitimate uses, to this impetuous by-play of organisation." (pp. 185-187.)

The Pathology of the Nervous System forms the subject of the Tenth Lecture, which is one of the most interesting and valuable of the whole. We must, however, content ourselves with this simple statement, for condensation would only spoil what is already quite full of matter, and a mere selection of parts would give no right idea of the whole.

The Eleventh Lecture is occupied with the subject of Evacuative Medicines in Relation to Humoral Pathology, and exhibits a melancholy, and, we cannot but think, somewhat overdrawn picture of the deficiencies of our knowledge of therapeutics, and of our impotence as respects the treatment of humoral diseases. We are deeply sensible of the great necessity which exists for more complete and more exact inquiries into the actions of medicinal agents, and agree with Mr. Simon in thinking, that full chemical examination of the blood and the excretions in health, in disease, and under the operation of particular remedies, is the right method for arriving at satisfactory conclusions. But we think more has been already done than he gives us credit for, and were surprised to find no reference whatever to the investigations of Mialhe, or to the very valuable observations of Dr. Golding Bird, on what he has denominated chemical diuretics.

The last Lecture treats of Morbid Poisons, and is undoubtedly one of the most interesting of the whole. After showing the general characteristics of these poisons, and their distinction from ordinary poisons, and illustrating their operation by the phenomena of continued fever and small-pox, he enters into the following explanation, which appears to us to give about the clearest idea of the events that we have met with anywhere.

"We have it accordingly demonstrated, that for the production of the disease there must be a *specific internal*, as well as a *specific external* condition; that the former is liable to be exhausted; and as it becomes exhausted in the production of material phenomena (namely, in the generation of pustules), therefore, obviously, it must itself be a *something material*, like that outward condition with which it cooperates; as the *poison of small-pox* is a something material and tangible, so the *susceptibility to small-pox* is a something material and tangible. Of this material—whatever it may be—no trace remains in the blood, when the disease has completed its course.

"Thus we get a general formula for the pathology of small-pox, which will be useful as a standard of comparison for the other poisons in our list. A certain organic material, A, soluble and partially volatile, affects particular relations with B, an ingredient (apparently a normal ingredient) of the blood: the result of their coming together are (1) the utter destruction of the latter, B; and (2) the immense increase of the former, A; not indeed at

the spot of infection, but elsewhere. On the one hand, the *virus* augments so much that it is found all over the body, forming innumerable pustules, and contaminating the breath with its volatile miasma ; on the other hand, the inward natural *ingredient of the blood* simultaneously diminishes, and at the end of the process is found totally exhausted.

" Look at this as a chemical experiment : you add A to B ; presently you find that B has vanished, and that A has undergone an immense augmentation. What is the meaning of this ? What has become of B ? Whence has the new A been derived ? It is difficult to avoid the conviction, which arises with almost logical certainty, that the increase of one material, and the decrease of the other, have stood in essential mutual relation ; that, in short, it has been a process of *conversion ;* that the essential relation of the two matters (that derived from *without*, and that contained *within* the blood) has consisted in the ready convertibility of one into the other ; that the specific power of the virus is its power of effecting this transformation, and no other.

" Finally, that material of the blood in which the virus of small-pox effects this peculiar change, seems, though a *normal* constituent, to be no *essential* one ; for the patient convalescent from small-pox, though with no demonstrable trace of that constituent in his blood, returns to at least as good health as he ever enjoyed previously. It may be added, too, that in a certain very small proportion of persons this natural ingredient of the blood appears to be not *uniformly* present ; for there are persons (apparently undefended by any previous occurrence of the disease, or by other known means) in whom your original inoculation would have failed ; persons, who would have shown a non-infectibility by the poison, and who therefore must (at least, for the time) have been without that material in their blood which constitutes the susceptibility to the disease." (pp. 263-4.)

The modified severity of attacks produced by inoculation is thus accounted for. " I may take this opportunity of explaining to you a difficulty which arises in the doctrine of morbid poisons, from considering the mitigation which their severity often appears to undergo, when they are infected by artificial inoculation. It appears, that while infection is the certain test and evidence of certain materials in the blood, inoculation is, in many cases, a much finer test than can be afforded by atmospheric inhalation ; and, as the severity of symptoms will be in proportion to that chemical state of the individual by which he is infectible, so I would explain the frequent comparative mildness of inoculated small-pox. By inhalation of the volatile virus, fewer would be affected, but those few would have the disease severely ; this method of infection including only those persons who possess a great abundance of the material which renders infection possible, and who (by reason of their large possession of that material which leads to the production of symptoms) would naturally suffer much ; while the process of inoculation (being, as I expressed it, a finer test) will elicit evidence of the disease from a far larger number of persons, will include many who possess a minimum of the symptom-producing material, and who, for that very reason, will suffer the disease in its mildest form. On the same principle, I would explain that other fact, well known in practice, that on the first invasion of an epidemic, the proportional mortality is greatest ; while later in its progress (when far larger numbers are attacked), the proportion of recovery is increased. At the commencement of the epidemic, the exterior causative influence is at its minimum : those only contract the disease at this period who possess, in an extreme degree, that interior condition which constitutes the specific susceptibility, and which (as I have already explained) measures the severity of an attack in exact proportion to the facility with which it is incurred." (pp. 267-8.)

Mr. Simon reviews at considerable length the two great theories of infection—*contagium animatum* and *fermentation*, and rejects both. His own views may be in part gathered from the following summary.

"Therefore, gentlemen, as respects those instances of human morbid infection with which we are best acquainted, we may recapitulate our facts, and state our theory, in the following terms: that certain materials of the blood —materials not essential to the performance of its nutritive functions—are, by certain circumstances, rendered liable to undergo definite and specific changes; under the influence of which they become determined, with increased rapidity, to the outlets of the body, and irritate these outlets in their passage; that these changes continue, until the materials affected by them are completely exhausted from the blood; and that the severity and duration of those changes is in proportion to the quantity of material seeking elimination: that the new matters engendered and evolved under these circumstances are capable, in various ways, and with more or less certainty, of producing a precisely similar succession of changes in the blood of another individual, or of any number of individuals; operating always on the same ingredients of the blood as that whence themselves arose, and determining it to the same outlets as that whither themselves were determined; so that the choice of material in the blood, and the choice of outlet in the body, constitute specific characters for the several morbid poisons distinctively, and so that the final products act always as special catalytics for that original material of the blood, wheresoever they may encounter it. But, finally, that under certain possible conditions of accumulation, or tension, in that original material, other circumstances may serve to start it in its progress of specific decomposition, without any demonstrable influence from that exterior catalytic, which is the ordinary occasion of its change." (pp. 285-6.)

We have thus concluded our task, which has been a very pleasant one; and in taking leave of the volume we heartily thank Mr. Simon for the instruction he has communicated to us in a form so agreeable, and strongly advise our readers to peruse the original for themselves.

Action of the Muscular Coat of the Bronchial Tubes in Respiration. By C. Radclyffe Hall, M.D. pp. 24. Worcester: Deighton and Co. 1850.

The object of this essay is to prove that the views of Reisseisen upon the regular and rhythmical action of the muscular coat of the bronchial tubes during respiration, may be sustained by experiment and by reasoning. The general opinion of physiologists has been against these views; and their objections are stated and combated by Dr. C. R. Hall with great acuteness and ability. His experiments clearly prove that when the vagus nerve in some animals had been divided, regular although rapid contractions of the lungs might be caused by the agency of galvanism applied to that portion of the nerve which descended to the lungs; thus shewing, in opposition to the views of most physiologists, that the bronchial muscular fibres are capable of rhythmical contraction, and that they are under the influence of the nerves. The objection made by Müller, that if the muscular coat of the bronchial tubes acted rhythmically in respiration, it would have to be under the influence of the will, is easily disposed of by Dr. C. R. Hall, who observes that the diaphragm and other respiratory muscles present rhythmical contractions which are not quite independent of the will, and that the heart exhibits rhythmical contractions which are quite independent of the will, and therefore that the more or less subordination of the will cannot be the condition on which rhythmical action depends. Although Dr. C. R. Hall succeeded in producing rhythmical contractions by stimulating the divided vagus nerve in a rabbit and in a fowl, yet in frogs, whose lungs possess no muscular coat, the stimulation of the vagus produced no such effect, but the expanded air-bag emptied itself by the mere force of its elasticity. Hence the author concludes that where there is no muscular coat, there are no rhythmical contractions. Dr. C. R. Hall draws an ingenious analogy between the respiratory

function in the fish and that performed by the mammalia. In the former, there are two distinct acts of respiration, namely, the deglutition of water by the mouth, and its ejection from the gills, and Dr. C. R. Hall suggests that these alternate and rhythmical actions may be effected by the relaxation and contraction of the interbronchial muscle, which is therefore analogous to the bronchial muscle of the mammalia, the act of expelling the water from the gills corresponding to the act of expiration, and the interbronchial muscle operating as an expiratory agent. In the mammalia, it may be presumed that the ordinary exciting cause of inspiration is distention of the capillaries of the lungs with carbonized blood, and the exciting cause of expiration, the presence in the air-cells and bronchial tubes, of unduly carbonized air. The author concludes that although many of the phenomena of respiration may be explained by the elasticity of the bronchial tubes, yet that the alternate acts of inspiration and expiration are regulated by the rhythmical action of the bronchial muscles.

Such is a very imperfect abstract of Dr. C. R. Hall's views. Regretting that our limits do not enable us to follow the author through all his experiments and arguments, we recommend his valuable essay to the careful attention of those who are interested in this branch of physiology.

Scale of Medicines with which Merchant Vessels are to be furnished, by Command of the Privy Council for Trade: with Observations on the means of preserving the Health, and increasing the Comforts of Merchant Seamen; Directions for the Use of the Medicines, and for the Treatment of various Accidents and Diseases. By T. Spencer Wells, F.R.C.S., Surgeon, Royal Navy. pp. 190. London: 1851.

This is an unpretending little volume, written by one thoroughly acquainted with his subject. Mr. Wells has evidently founded his practice upon a considerable amount of experience and observation, as well as upon a judicious study of the best writers. His remarks upon *ventilation* are particularly good. It is distressing to reflect that a very little attention to this subject would have prevented several recent disasters attended with much loss of life, from the immuring of multitudes of people under hatches in bad weather. In treating of *diet*, the author justly prefers meat which is preserved in close vessels to that which is salted; and he also states his opinion that in all large ships, and certainly in all steam-ships, it is quite practicable to convert salt water into water which is fit for human consumption. Some observations are arranged alphabetically upon the accidents and diseases to which seamen are most liable, and a scale of medicines and medical stores is appended. Short practical descriptions are given of the most common forms of disease, and their treatment is also concisely laid down. The doses of medicines, and their mode of administration, are also carefully detailed. In cases where a ship is sent to sea without a medical practitioner on board, this little work will prove extremely useful.

We cannot omit this opportunity of remarking that far too little attention is generally paid in merchant vessels, even of the first class, to the selection of efficient medical practitioners; and we have reason to fear that *cheapness* is the chief consideration with owners in making these appointments.

Dr. Hooper's Physician's Vade-mecum; or a Manual of the Principles and Practice of Medicine. By Wm. Augustus Guy, M.B. Cantab. *New Edition.* pp. 576. London; 1851.

This is an improved edition of a deservedly popular work. Students and practitioners will find it a well arranged and trustworthy book of reference. The formulæ are judicious, and are eminently calculated to assist the young prescriber.

LETTER TO THE RIGHT HONOURABLE LORD CAMPBELL, LORD CHIEF JUSTICE OF THE COURT OF QUEEN'S BENCH, ON THE CLAUSE RESPECTING CHLOROFORM IN THE PROPOSED "PREVENTION OF OFFENCES BILL". By JOHN SNOW, M.D.

It is a pity that when legislators set about making laws, they do not take council with competent advisers. Lord Campbell's domains are law and literature; but in the department of toxicology he has assuredly no status; and this Dr. SNOW has seasonably shown in reference to chloroform. We hope that the noble and learned lord will reassure the public, and admit that assaults cannot be facilitated by means of this drug.

The following passages from Dr. Snow's letter (which we regard as a valuable contribution to state-medicine) are interesting and conclusive.

"The prominent mention of chloroform, in the fourth clause of the Bill presented by your lordship to the House of Lords, on the 24th ult., is to be regretted on other grounds. It ill becomes the gravity of the law, and is, I feel assured, far from your lordship's intention, that a legal enactment should be made on a false alarm, or to meet a trivial and unsuccessful innovation in the mode of attempting a crime: to legislate on this matter would revive the groundless fears of the public, which have subsided, or been allayed; and might even cause evil-disposed persons to make trial of a means, which they would conclude to be not without efficiency, when it had given rise to a law for its suppression. There is no reason to believe that chloroform has been employed in more than two instances with criminal intent; and so far from aiding the perpetration of crime, it has led to the immediate detection of the offender, on both occasions. The knowledge of these two cases is more calculated to deter from similar attempts, than any increase of the punishment, which a culprit might expect to escape altogether, by avoiding detection.

"When administered gradually, chloroform can be breathed easily enough, by a person willing and anxious to take it; but he has to draw his breath many times before he becomes unconscious. During all this interval, he has a perfect perception of the impression of the vapour on his nose, mouth, and throat, as well as of other sensations which it causes; and every person who has inhaled chloroform retains a perfect recollection of these impressions and sensations. If chloroform be given to a child whilst asleep, the child awakes, in nearly every instance, before being made insensible, however gently the vapour may be insinuated. No animal, either wild or tame, can be made insensible, without being first secured; the chloroform may, it is true, be suddenly applied on a handkerchief to the nose of an animal, but the creature turns its head aside, or runs away, without breathing any of the vapour. If a handkerchief, wetted with sufficient chloroform to cause insensibility, is suddenly applied close to a person's face, the pungency of the vapour is so great as immediately to interrupt the breathing, and the individual could not inhale it, even if he should wish. From all these facts it is evident that chloroform cannot be given to a person in his sober senses, without his knowledge and full consent, except by main force. It is certain, therefore, that this agent cannot be employed in a public street or thoroughfare; and as the force that would be required to make a person take it against his will, would be more than sufficient to effect a robbery, and enough to effect any other felony by ordinary means, it would afford no help to the criminal in more secluded situations. Supposing that the felon or felons could succeed in keeping a handkerchief closely applied to the face, the person attacked would only begin to breathe the chloroform when thoroughly exhausted by resistance or want of breath, and when, in fact, the culprits could effect their purpose without it. * * * *

"On January 10th, a robbery was committed in Thrall Street, Spitalfields, for which two women, named respectively Elizabeth Smith and Margaret Higgins, were examined three or four times at Worship Street, tried at the

Central Criminal Court on February 8th, convicted, and sentenced to be transported for fifteen years. The following is the evidence given by the prosecutor, at one of the examinations before Mr. Hammill. He was proceeding along the Whitechapel Road, between 9 and 10 o'clock in the evening, 'when he felt some one, whom he believed to be a woman, touch his left side, and at the same time felt a rag or handkerchief pressed over the lower part of his face. He instantly became insensible, and was conscious of nothing that occurred to him, until about day-light the following morning, when he slowly revived, and upon recovering sufficiently, found himself lying in a very dirty bed, in a wretched apartment.' (*Times*, January 25, 1850.) It will be observed by your lordship that the witness gives no account of either the local or general sensations which chloroform causes. He felt a handkerchief or rag applied to his face, and instantly became insensible. This circumstance alone indicates that chloroform was not the agent employed. But there are other reasons which prove the view I entertain of the matter. Whitechapel Road is a very busy thoroughfare between 9 and 10 in the evening; and admitting that a gentleman could be made insensible in the instantaneous manner alleged, without the opportunity of making the least resistance, or calling for assistance, it is impossible that he could be dragged, or otherwise conveyed, in that state to another street, without attracting the attention of passers by, and even causing the collection of such a crowd as would ensure the interference of the police. As the effects of chloroform subside very rapidly when quickly induced, the dose would, moreover, require to be repeated, before the victim could be conveyed a distance of two or three hundred yards. If the transaction occurred at the time and placed alleged, the prosecutor, however insensible he might be, must have appeared to accompany the woman voluntarily; but I know no drug which can be administered on a handkerchief to produce effects of this kind, and am inclined to believe that the agent which could cause such results must be more subtle than anything that can be contained in an apothecary's phial. Whether it was witchcraft, animal magnetism, or some other invisible kind of attraction, I shall not attempt to decide. The long continuance of the insensibility (ten hours) in this case, shows that it was not caused by chloroform, the effects of which pass off in a few minutes, or, at the longest, in half an hour; and this remark applies to every substance that will quickly cause insensibility, when breathed from a handkerchief; for the volatility which enables it to be taken in this way, causes its ready elimination from the blood, in its passage through the lungs. It must be concluded, therefore, that the insensibility, in this instance, was caused by something which had been swallowed. Laudanum, ardent spirits, and fermented liquors, are articles which are capable, amongst others, of causing prolonged stupor, but there are no means of ascertaining now what might have been used. After the examination of the prisoners in this case had been two or three times adjourned, a woman came forward and gave evidence that, on an occasion previous to the robbery, the prisoner Higgins 'had told her that a man named Gallagher, with whom she cohabited, had undergone an operation at the London Hospital, where they had given him some stuff to send him to sleep, and that he had contrived to bring some of it away with him from that institution.' (*Times*, January 25, 1850.) The medical officers of the London Hospital have no knowledge of any chloroform having been taken away by a patient; and it must occur to your lordship that the statement of a person who alleged that she had been in the confidence of the thief, and had kept her unlawful secrets for a long time, carries with it no great weight. Whilst the alleged action of chloroform in the above instance was too instantaneous, in the other case of alleged robbery by means of this agent its reputed action was so long deferred, as to prove clearly that it proceeded from a different cause.

"Charlotte Wilson was tried at the Surrey Adjourned Sessions, on February 9th, 1850, for a robbery committed on a man in the beginning of the

previous month. The prosecutor stated that he was walking along the Borough, towards London Bridge, when he was accosted by the prisoner, who passed a handkerchief across his face, and he became very unwell. Not suspecting that any narcotic was contained in the handkerchief (a circumstance which alone is sufficient to prove that no chloroform was used), he ran into a public-house hard by, and called for a glass of brandy. A police constable stated that he saw the prisoner accost the prosecutor, and pass something across his face. He then saw them enter the public-house, when he saw the woman drinking with the prosecutor. About ten minutes afterwards he saw the prisoner run out of the house with a hat and scarf. The prosecutor was at that time insensible.

"The effects of chloroform are induced whilst a person is breathing it, and attain their greatest intensity within twenty seconds after the inhalation has ceased; it is consequently impossible for a person to go into a public-house, and be seen drinking there, between the time of taking the chloroform and the insensibility induced by it. The man was a considerable time before he recovered his senses; another circumstance which proves that the stupor had not been caused by chloroform. A non-medical witness, who gave evidence before the magistrate, was confident that the stupor or insensibility was not caused by liquor, but by some deleterious article such as chloroform. The court and jury who tried the prisoner were of the same opinion, and she was sentenced to be transported for ten years, although a student from any hospital in London could have informed the court that chloroform had not been employed. The landlord of the public-house in which the robbery was committed, said that the prosecutor appeared to be in liquor when he entered. This evidence may be safely received; for a publican could not be deficient in experience on this point, and could hardly be influenced by prejudices that would lead him to consider a customer intoxicated who was not so. This evidence being admitted, the case is perfectly clear; for nothing is more common, when a person in liquor goes on drinking, than for him shortly afterwards to be lying insensible. * * *

"On April 30, 1850, a young man, named Charles Jopling, was placed at the bar, before Mr. Broughton, at the Marylebone Police Court, charged with having attempted to administer chloroform, with intent to violate a young woman, to whom he had been paying his addresses for nine months. It was proved, that whilst returning from a concert at a public-house, about one o'clock the same morning, the prisoner induced the complainant to accompany him down a yard, when he uncorked a phial, poured the contents on a handkerchief, and applied the latter to her face. She immediately pulled away the handkerchief, and called out so loudly that she obtained the assistance of a policeman from the neighbouring street, who took her assailant into custody. When asked by the magistrate if she felt any ill effect from the application of the handkerchief, the complainant replied as follows: 'I did not, your worship, as I pulled it away from my face instantly; it was completely saturated with wet, and had a remarkably strong smell.' The prisoner was remanded, and bail was accepted for his appearance on a future day. During this interval he married the young woman, and at the next examination she begged for his discharge. After a further remand, and a severe lecture, the worthy magistrate reluctantly surrendered the prisoner to his wife, who, if she does not remain of the same forgiving disposition, doubtless finds means of punishment as severe as any which the law had in store for him.

"In October last, a man named Charles Venn contrived to secrete himself under a bed, in an hotel at Kendal, and attempted to give chloroform, at midnight, to an elderly gentleman in his sleep. The effect of this attempt was to awake the gentleman; and although the robber used such violence that the night-dress of his victim was covered with blood, and the bedding fell on the floor in the scuffle, he did not succeed in his purpose. The people

in the house were disturbed, and he was taken into custody, and ultimately sentenced, at the Westmoreland Michaelmas Sessions, to eighteen months' imprisonment with hard labour, including one month's solitary confinement.

"A crime was committed in France on a person under the influence of chloroform, but not by the agency of that article. The chloroform was voluntarily inhaled by a female, for the lawful purpose of having a tooth drawn without pain, and the dentist took advantage of the stupor so induced, as he might have done of a fainting fit, or any other kind of insensibility, to effect violation.

"I trust that I have said sufficient to induce your lordship to consider whether it would not be advisable to withdraw the word chloroform, the presence of which can only be alarming to the public, suggestive to the criminal, and little creditable to the sagacity and gravity of the law; whilst its removal would not affect the operation of the act, even in a case, should such a one again occur, in which it might be foolishly attempted to exhibit the article.

"In conclusion, I will venture to make a few additional remarks on the operation of the fourth clause of the bill presented by your lordship.[1] All the dietetic and medicinal, as well as other narcotics, are capable of causing stupor when taken in sufficient quantity. The stupifying or overpowering matters in most frequent use in this country, are ardent spirits, wine, and beer. I conclude that the clause under consideration does not apply to spirituous and fermented liquors, when openly given, with whatever intent, but to the fraudulent administration of other substances, similar in action, but more powerful. It cannot be denied that opiates are sometimes exhibited, with felonious intent, in malt liquor, the bitterness of which disguises their taste, and such a crime cannot be too severely punished; but it would be a great error to conclude that the offence called *hocussing* is so common as the statements of prosecutors at the police courts would imply. Persons who have been dead drunk are very unwilling to admit, even to themselves, that the result was the consequence of their own voluntary potations, and still less willing to admit it to the world, when they have to complain of having been robbed whilst in bad company. Therefore, before such evidence is received as conclusive, it should be confirmed by chemical analysis, or in some other way; otherwise errors may occur, such as that at the Surrey adjourned sessions, alluded to above.

"The rapid supervention of stupor ought not to be accepted as proof that it was not occasioned by spirituous or fermented liquors, for these articles sometimes produce their effects with great velocity. Ardent spirits, indeed, under some circumstances, act with greater rapidity than almost any thing else except prussic acid, and on some occasions are not even surpassed by that poison. * * *

"At the trial of Johannah Driscoll at the Central Criminal Court in December last, for a robbery committed in a house of ill fame, it was alleged that chloroform might have been put into some gin taken by the prosecutor. Chloroform, however, although very soluble in rectified spirit of wine, does not mix easily with potable spirits, and when dissolved imparts to them such a very hot and sweet taste, that no one could take them without being aware of the adulteration."

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[1] The clause runs as follows. "And whereas it is expedient to make further provision for the punishment of persons using chloroform or other stupifying things, in order the better to enable them to commit felonies: be it enacted, that if any person shall unlawfully apply or administer, to any other person, any chloroform, laudanum, or other stupifying or overpowering drug, matter, or thing, with intent thereby to enable such offender, or any other person, to commit any felony upon the person to whom the same may be applied or administered, or attempted to be applied or administered, or upon his or upon any other person's property, every such offender shall be guilty of felony, and being convicted thereof shall be liable, at the discretion of the court, to be transported for life, or for any term not less than seven years."

A Letter to the Right Hon. Sir George Grey, Bart., M.P., on some of the Social Relations of the Medical Profession. By George Robinson, M.D., Newcastle-upon-Tyne. pp. 28. London: 1850.

This pamphlet is written with some ability, and sets out with a profession of candour and impartiality; but, in the first few pages, the author has manifested such an utter ignorance of the condition of the general practitioners of this country, and of their relation to the different licensing boards, that we think it unnecessary to comment upon the statements he brings forward, or the plans of reform which he advocates. If Dr. Robinson had consulted the evidence, which is open to him and to all, upon the extensive strides which the general practitioners of this country have made since 1815, he would not have written so much that is absolutely inapplicable to the present state of the profession. He has represented that the Apothecaries' Act, of 1815, has degraded medicine to a trade! The effect of it has been precisely the reverse, for it has elevated a trade to a profession. The course of events, and the increasing spread of intelligence, may have rendered the Act inapplicable to the practitioners of the present day; but if the legislature should repeal it, they will no doubt substitute some other measure of equal, or of greater efficiency. In the meantime, good medical legislation is not likely to be forwarded by the publication of such essays as that of Dr. Robinson; in which the past and not the present state of the profession is made the basis of the proposed reform.

Pharmacopœia ad Usum Nosocomii Phthisicorum et Pectoris Morbis Ægrotantium accommodata. Editio secunda. pp. 42. Lond. 1851.

This is a very admirable collection of formulæ for the administration of medicines in the different stages, and for the relief of the various urgent symptoms which occur in phthisis and other diseases of the chest. Like the report which emanated[1] from the conjoined physicians of the Brompton Hospital, it bears the stamp of sound science and excellent practice. It ought, however, rather to be considered as a selection from the most commonly used prescriptions of the physicians of the hospital, than as a codex of simple or elementary formulæ equally calculated to assist the labour of the dispenser, and to prevent the prescriber from wholly falling into the routine exhibition of complex formulæ, the exact composition of which he may often fail to bear in mind. As hospital officinal preparations, the formulæ ought perhaps to have been simpler, more scope being left for each prescriber to adapt them by additions to the specialities of each case.

An example will best illustrate our meaning. Among the Misturæ, we find the following.

Mistura Strychniæ. ℞ Strychniæ semigranum, Acidi nitrici diluti fluidrachmam dimidiam, Acidi hydrocyanici diluti fluidrachmam, Misturæ camphoræ fluiduncias sex. Fiat mistura. Dosis ʒij ad ʒss.

In place of the above, we would prefer the following.

Mistura Strychniæ Nitratis. ℞ Strychniæ semigranum, Acidi nitrici diluti fluidrachmam dimidiam, Aquæ fluiduncias sex. Fiat mistura.

The mixture ought obviously to be called by its correct name; and as we presume it is chiefly used in the Brompton Hospital as a remedy for vomiting, the camphor mixture ought not to form a constant ingredient; for camphor is very disagreeable to some patients, and not very uncommonly creates nausea and vomiting: then, the prussic acid ought either to be acknowledged in the name of the mixture, or omitted as an ingredient, because it is a medicine at least as efficacious in allaying vomiting as the nitrate of strychnia. It is far better for each prescriber to add the prussic acid when he pleases; for the giving the two invariably in combination is quite unnecessary, and must effectually prevent a correct opinion being formed of the cases in which one or the other is specially useful. Pupils hearing the "Mistura Strychniæ"

[1] For a copious abstract of this Report, see London Journal of Medicine, for January 1850.

ordered, and observing the vomiting cured by it, might never think of turning up the pharmacopœia, and there learning that the relief might depend upon the hydrocyanic acid, and not on the strychnia.

The INHALATIONES require amendment. In the first place, the simplest and best method of *dry inhalation* is in the form of cigarettes. The substance (be it opium, conium, cannabis, etc., having been reduced to powder) is mixed with some mild and suitable substance, and then formed by the little machines (which may be had for a few pence in the Lowther Arcade) into cigarettes. Patients can easily be taught to draw the smoke into the lungs, and slowly expire it, as some amateurs treat the cherished fumes of "a mild Havannah". Medicinal cigarettes (following the formulæ of Dorvault, etc.), might, with very great advantage, be introduced into the Brompton Pharmacopœia. In *moist inhalation* there ought, we think, to be a large body of aqueous vapour, otherwise the inhalation is performed with difficulty; the vapour only rising in abundance when excessive heat is applied. The following formula is calculated to bring a valuable medicine into discredit.

INHALATIO CREASOTI. Creasoti minima sex, Aquæ fluiduncium dimidiam. Inhaletur vapor (caloris ope) ex vase idoneo.

We have extensively prescribed creasote inhalations, and can testify to their signal utility in a vast number of cases. They promote expectoration, diminish excessive secretion in the air-tubes and from the interior cavities, remove fœtor when it exists, and have a general soothing influence. The creasote when inhaled must, however, to be of any use, be taken into the lungs without effort, and by inhaling freely, from a large-mouthed vessel, the steam of *creasote water*. Altogether, creasote is too little considered at Brompton. We would recommend the introduction of the creasote mixture of the *Edinburgh Pharmacopœia*, and also a mixture with mucilage. A creasote pill with crumb of bread would likewise often be useful. When the nitrate of strychnia and hydrocyanic acid do not remove sickness, creasote, in one or other of these forms, will rarely fail to give relief. When patients are taking the coarser kinds of cod-liver oil, the administration of a dose of creasote mixture, half an hour before each dose of the oil, will generally enable a squeamish stomach to retain it; it will also be a valuable therapeutic adjunct to the oil in many cases.

There are only two formulæ for ENEMATA—the "Enema Catharticum" and the "Enema Opii". An enema of acetate of lead, another of nitrate of silver, and another of logwood are wanted; for in the diarrhœa of phthisis they are all invaluable; and in some cases, they may each in turn be required.

The only SOLUTIO is the following:—

SOLUTIO IODINII CAUSTICA. ℞ Iodinii, Potassii iodidi, singulorum unciam, Spiritûs rectificati fluiduncias duas. Solve.

A much milder solution of iodine is sometimes wanted as a daily application to the chest. The subjoined is a good formula: or the above may be diluted.

SOLUTIO IODINII MITIS. ℞ Iodinii et Potassii Iodidi, singulorum drachmas duas, Liquoris potassæ drachmas tres. Aquæ fluiduncias duas. Fiat solutio ope penicilli applicanda.

The only UNGUENTUM is the following:—

UNGUENTUM ANTIMONII POTASSIO-TARTRATIS. ℞ Antimonii potassio-tartratis drachmam, Adipis purificati drachmas tres. M. F. unguentum.

For most cases, this is too violent: but the prescriber can easily, *pro re natâ*, direct more lard to be added. To make a proper ointment, free from grittiness, the salt ought to be dissolved in a few drops of water before it is mixed with the lard; and the addition of this, as a direction to the apothecary, would improve the formula.

From the tenor of our remarks it may be inferred, that it is easier to criticise a good Pharmacopœia than to compile even an indifferent one. No book of this class, we believe, can be made to suit the notions of every practitioner; but there are few well-informed readers who will not derive practical hints from the perusal of the little work before us.

ALPHABETICAL CATALOGUE

Of the Papers which have appeared in the French Medical Journals for 1850.

BY ALEXANDER HENRY, M.D.

The following are the Journals referred to in this Catalogue, with the abbreviations used.

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Comptes Rendus de l'Académie des Sciences ...	Compt. Rend.
Archives Générales de Médecine	Arch. Gén. de Méd.
Bulletin Général de Thérapeutique	Bull. Gén. de Thér.
Gazette Médicale	Gaz. Méd.
——— des Hôpitaux	Gaz. des Hôp.
L'Union Médicale	Union Méd.
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CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

CASE OF HYDROPHOBIA.

Dr. P. Redfern, of Aberdeen, relates in the *Edinburgh Monthly Journal* for February 1851, a case of hydrophobia, occurring twenty-eight days after the bite of a rabid dog, and terminating in death on the fifth day after the commencement of the symptoms. The patient was a child, two years of age. The post-mortem appearances, conjoined with the most careful microscopical examination, especially of the eighth pair of nerves, failed to detect any structural lesion. But it is not improbable that no structural lesion whatever exists in this and in many other nervous diseases ; for it is already shown, that a peculiar force is manifested in animals in the physiological actions of the nervous and muscular systems, and that, though this force resembles electricity, yet it is perfectly distinct from it. It then appears very possible, that an increased or perverted action of such a force, upon the tissues of an animal body, may give rise to the whole phenomena of alarming and destructive diseases, and yet leave their structure without a single evidence of material change.

ACUTE RHEUMATISM, WITH DROPSY OF THE PERICARDIUM, IN A CHILD THREE YEARS OLD.

This case appeared, from the symptoms and post-mortem examination, to have been one of simple dropsy of the pericardium, produced by metastasis from the right lower extremity. Authoritics speak of both the remarkable points distinguishing this case, viz., acute rheumatism at so early an age, and passive pericardial effusion without inflammation, as extremely rare. The writer (Mr. W. E. Cooksey) inquires if similar cases have been met with. [*Prov. Med. and Surg. Journ.*, Feb. 5, 1851.]

TREATMENT OF APHONIA BY STIMULANT INHALATION.

In the *Transactions of the American Med. Assoc.*, vol. iii. 1850, p. 135, Dr. Pancoast writes to the following effect.

The form of aphonia, here alluded to, is that following an ordinary cold, without leaving any perceptible organic lesion in the pulmonary apparatus. The voice is reduced to a faint hoarse whisper, distinguishable only at the distance of a few feet ; and a continued attempt to talk, though it gives no pain, becomes quickly attended with a feeling of fatigue, as though there were some obstruction to the passage of air through the larynx. In breathing merely, there is little or no difficulty ; as the individuals are capable of undergoing considerable exertion without any unusual signs of fatigue. Having had an opportunity, several years ago, of observing the movements of the vocal chords in a person who had attempted suicide, and was left with a cicatrised wound opening into the ventricles of the larynx, Dr. Pancoast watched with great interest the play of these vocal chords, which were fully exposed to view, and was astonished at their frequent, varied, and extensive movements. From the evidence he obtained with regard to their motion, he was led to infer that this form of aphonia arose from a partial paralysis of the intrinsic muscles of the larynx, to be cured by stimulating them to action. His first case occurred eight years ago. The patient was a healthy young country girl ; the aphonia had lasted for six months, resisting all treatment. She was made to inhale chlorine, gradually liberated from

chloride of soda or lime, by very dilute hydrochloric acid, in a common glass retort. The inhalation was continued for some minutes, and repeated two or three times a day, according to the degree of irritation produced in the throat and larynx. From the first trial, the patient's voice improved, and in three days had become nearly as strong as ever. Two months after her return to the country, another cold was followed by an attack of aphonia, which also yielded to a few inhalations of chlorine vapour. Dr. P. has since treated a case in a medical practitioner, who had tried, among other remedies, repeated applications of strong solution of lunar caustic, without any good effects. The voice was restored to its natural strength in a week or ten days. He suggests that care should be taken that the chlorine be not developed too rapidly. He believes that it acts merely as a local stimulant, and that iodine, or any other exciting vapour, would produce similar results.

TREATMENT OF SCARLATINAL OTORRHŒA.

In the treatment of the otorrhœa, which sometimes follows scarlatina, M. Trousseau employs, instead of simple alkaline or emollient applications, the same topical remedies as would be used in the most severe affections of the mucous membrane or skin—mercurials or the nitrate of silver. He recommends a liniment, consisting of binoxide of mercury, twenty-five parts, oil of sweet almonds and lard, of each five parts. The external meatus is washed out and well dried, and a brush dipped in the liniment is introduced twice a day. By this means, M. Trousseau lately cured a case of scarlatinal otorrhœa, in a little girl, which would otherwise probably have destroyed the small bones of the ear, and produced caries of the petrous portion of the temporal bone. M. Trousseau also recommends the application of a solution of nitrate of silver, in addition to the mercurial liniment; it gives no pain, and may be safely intrusted to the parents of the child. A little binoxide of mercury may also be mixed with oil, and dropped into the ear, which is then to be plugged with cotton wool. As long as there is no perforation of the membrana tympani, these remedies are excellent; they are applicable not only to children, but to adults labouring under otorrhœa, or under that form of eczema which renders the meatus dry, and produces some deafness. This is easily remedied by the preparations described above, if care be taken to keep the tissues moist in the intervals with olive oil. [*Journal de Méd. et de Chir. Pratiques*, Oct. 1850.]

TUMOUR OF THE OPTIC THALAMUS INCLOSING A CALCAREOUS CONCRETION: ABSENCE OF MARKED CEREBRAL SYMPTOMS.

A servant, a young woman, unmarried, died quite suddenly, after a short struggle, having only complained of some confused pain in her head the day before. She had not exhibited any well marked symptoms of cerebral disease. The place of the right optic thalamus was occupied by a tumour, the size of a walnut, encased in a thin lamina of healthy nervous substance, apparently the remains of the thalamus. It projected considerably into the ventricle, and inclosed a calcareous concretion the size of a filbert, of irregular figure. The tissue of the tumour was distinguished from nervous substance, by its greater consistence, and its yellowish pellucid colour; the fresh section had a striated and gelatinous appearance; small earthy particles were disseminated throughout its substance. The tumour, and its enveloping brain substance, became quite detached by maceration in spirit. The ventricles were dilated by limpid serum, and three ounces of limpid serum lay in the subarachnoid space. The veins and sinuses contained less blood than natural. The other organs were healthy; the uterus was gravid.

The tumour seemed, under the microscope, to consist of small cells and granular matter, with a sparing intermixture of fibrous element. [Mr. Bindley in *Ninth Report of Birmingham Pathological Society*, p. 6.]

DR. ZOEHRER'S EXPERIMENTS ON RETRO-VACCINATION IN VIENNA.

The following account of some experiments on retro-vaccination, performed by Dr. Zoehrer of Vienna, is extracted from the reports of the General Hospital at Vienna for 1848 and 1849, published in the *Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, for November 1849, and Sept. and Oct. 1850.

Since the year 1842, Dr. Zöhrer has been performing experiments on the transmission of vaccinia from the child to the cow. The results have not been altogether satisfactory, from the cows being neglected by the persons who had the care of them; but, with the friendly assistance of Herr Kotmeier, the bailiff at Gersthof near Vienna, he met with better success in 1848 and 1849.

Experiments. 1. A white milch-cow with brown spots, and fine-skinned, which had calved for the first time three months before, and had the udder and teats well formed, was selected from a herd of thirty. Two deep punctures were made on each nipple on the 9th April, and matter was introduced, which had been transmitted through the human subject since the time of Jenner. Up to the 14th, there was no change, beyond a knotty hardness and increased heat.

The second experiment was made on a dark-brown, thick-hided, pregnant cow, seven years old. The matter, derived from spontaneous cow-pock in 1843, was introduced into the udder.

In the meantime, from the 14th to 16th April, vaccine points were developed in the first cow. Seven of the efflorescences remained hard, with a broad base, and firm exudation in the cellular tissue. When punctured, they gave exit to a scanty tenacious fluid, coloured with blood. The eighth spot, near the end of the right hinder nipple, exhibited on the eighth day a dark, small, translucent ring, with a well-raised margin and deep central depression, and furnished on puncture some perfectly clear lymph. With this a male child, Rudolf, four months old, was vaccinated, by means of four deep punctures. Up to the 20th of the month the punctures presented small indurations, which on the third day exhibited vesicles filled with clear contents, had a small hard dark-red apex, with considerable exudation in the surrounding cellular tissue. On the 26th, desquamation commenced; it was accompanied by obvious febrile symptoms, and was finished at the beginning of May.

In the meantime, crusts had formed on all the pustules in the cow; they left well marked cicatrices. In the second cow, the pocks were not well developed, and what little matter there was, was lost, through the carelessness of those who had the care of the animal.

On the 27th April, a female child, Rosa, 19 months old, sister of the above mentioned boy, was vaccinated with matter taken from his arm. The results were as follows. *First day.* Redness of the punctured spot. *Second day.* No further change. *Third day.* Palpable hardness. *Fifth day.* Formation of small vesicles. *Sixth day.* Enlargement of these, with raising of their edges. *Seventh day.* General febrile disturbance. *Tenth day.* Diarrhœa; excrements fœtid, yellow, thick, at a later period fluid. *Twelfth day.* Tongue loaded; child restless, hot, and sleepless. *Thirteenth day.* Commencement of desquamation. The child was more quiet, and took food, which it had previously refused. *Seventeenth day.* The pocks were covered with small, dark, very firm and thick crusts, which gradually fell off, and left deep cicatrices, of a strong red colour.

At the same time with this case, a female child, T. F., 11 months old, was vaccinated. The results were similar to those which have been just related; and were moreover accompanied by extensive vaccine roseola. From the child T. F. were vaccinated two foundlings, of six weeks old, and one of a fortnight old. In two of the cases six, in one five vaccine efflorescences

appeared; they had a slow course, contained bluish transparent matter, and were accompanied by febrile disturbance; the crusts were hard and darkish, and left deep cicatrices.

On June 16, 1849, Dr. Zöhrer inoculated a cow with vaccine matter transmitted from a retro-vaccination performed in 1842. The animal was three years old, thick skinned, and small, with loose pendulous udders and teats: it had calved three months before. The lymph was inserted into a deep puncture in each nipple. On June 19th, the spots appeared faded, so that there seemed to be little hope of success. On June 21st all the punctures, on both sides, were surrounded with an areola eight lines broad. On June 22nd, there was a pustule developed on the hinder left nipple. The border was very hard, the areola narrow and dark red, and very tender to the touch. The temperature of the udder was raised, and the place where the pustule was felt knotty. On puncturing the pustule, a small quantity of clear lymph exuded, with which, within an hour, Dr. Zöhrer vaccinated a child, F. A., in the Foundling Hospital.

This was on the 22nd of June. On June 25th, the punctures were reddened. On June 26, the punctures had faded, except two. June 27, the indurations had increased. June 28, vesicles appeared, filled with lymph. June 29, the vesicles had extended, and were surrounded with a red areola. Two children were now vaccinated with lymph taken from this case. July 3, the pustules had extended, and still contained fluid lymph. The process ended in the formation of a thick dark crust.

In the cow, no result was obtained from the anterior nipples. The pustule on the hinder right nipple was extensive, hard, and deeply seated in the corium. On June 23 Dr. Zöhrer punctured it, and with the lymph (which was rather opaque and scanty) he vaccinated a child four weeks old, without effect. Both the pocks in the cow passed through their course pretty rapidly, so that desiccation commenced on the eighth day, and on the twelfth day hard dark crusts were present.

Second Descent. From the child F. A., three others were vaccinated. 1. M. J., six weeks old. Six punctures were made; of these five presented hard, small, strongly glistening pustules. The course was slow. The vesicles remained hard, and contained clear lymph even after the twelfth day. 2. Sch. A., ten days old. The pustules were small and hard, and the course the same. The crusts were slow in forming; they were thick, and left deep round cicatrices. 3. M. M., eleven days old. The pustules were small and hard, of the size of linseeds. The course was slow: the pocks remained small until they dried. There were no febrile symptoms in either case; all three had some miliary eruption, but nothing very remarkable.

Third Descent. 1. E. G., was vaccinated. Six pustules appeared, which presented nothing remarkable in their course. 2. W. J., aged nineteen months; and his sister E., aged nine months. Dr. Zöhrer did not see the child till the twenty-third day, when there were tolerably compact dark brown crusts; the pustules appearing to have been in the mean time well developed. 3. St. E., fourteen months old; no result. 4. W. A., ten days old. Six pustules were formed, which passed through a normal course. With these, other children, B. A. and W. A., each twelve days old, were vaccinated; and the lymph was continued to be propagated through the human subject, with encouraging success.

SCHMIDT'S REMEDY FOR TAPE-WORM

The details are extracted from Most's *Encyklopädie der gesammten Medicinischen und Chirurgischen Praxis* (B.I., p. 992, 2nd edition). The composition of the remedy is also presented, though with less fulness, in the *Pharmacopée Universelle* of Jourdan (T. I., p. 313, 2nd edition).

By the process of Schmidt, the tape-worm is said to be expelled in from three to five days, without injury to the patient. A trial of it was made,

under the authority of government, in the Berlin hospital, when the results were found to be so favourable, that the king of Prussia purchased the secret by bestowing a pension of several hundred dollars upon the originator. The plan substantiates the purely empirical fact, that vermifuge medicines, when exhibited separately, are less efficacious than when combined in complex formulæ.

The patient commences by taking, in the morning, the following mixture: ℞ Pulv. rad. valer. min. ʒvi; fol. senn. ʒij; aq. ferv. ℥vi; infunde et cola. Adde sal. Glauber. crystal. ʒiij; syr. mannæ ℥ij; elaeosacch. tanaceti ʒij; M.S. Two tablespoonfuls every two hours, drinking freely at intervals of sweetened coffee. With this he perseveres till seven in the evening. At noon he takes a thin gruel; and in the afternoon one or two herrings, with the milt. At eight in the evening, the patient has a herring salad, with minced raw ham and oil, sweetened with sugar, plentifully added. Frequently portions of the tape-worm begin now to be discharged. At six in the ensuing morning, he commences the following pills every hour: ℞ Assafœtidæ, extr. graminis, āā ʒiij; gambog., pulv. rhei, jalap., āā ʒij; pulv. ipecac., digit. purp. sulph. antim. aurat., āā ℈ss; sub. muriat. hydr. ℈ij; ol. tanacet., æther. anisi, āā gt. xv. M. Divide into pills of two grains each, which are to be placed in a well-stoppered bottle; of these, six pills are to be administered every hour, with a teaspoonful of common syrup. Half an hour after the first dose, a tablespoonful of castor oil is also given. Sweetened coffee is again to be taken freely at intervals during the day. At two in the afternoon, the worm is usually wholly expelled, when the pills are to be discontinued. Should only separate portions be voided, the remedies are persisted with, and a second dose of castor oil becomes requisite. Meat soup is allowed at dinner, and in the evening. On the succeeding day, six pills are exhibited at three different times—morning, noon, and evening. Such is the entire and complicated process. Most adds, that this method of cure has been a hundred times successfully tested: and that it warns young physicians, not to condemn too hastily the complex prescriptions of older practitioners, as there is often produced a *tertium quid* of real efficacy, which could not have been developed in more simple compositions. We leave it to British practitioners to judge, whether this commendation ought to be sufficient to induce them to give a trial to the singular process—ham and herrings included. [Abridged from the *Monthly Journal of Med. Science*, March 1851.]

IMPERFORATE ANUS: LIFE PROLONGED TO THE HUNDRED AND SECOND DAY WITHOUT EVACUATION.

In this case reported by Mr. A. Prichard in the *Provincial Medical and Surgical Journal* for March 5, 1851, a well-formed anus was disclosed on examination, and an operation proposed to remedy the obstruction in the natural passage, but not assented to by the mother. The case is peculiar, as showing the length of time which the infant lived without ever having an evacuation of the bowels, and having been scarcely at all sick. It never threw up anything like fæcal matter, but, as in other children, a little of the mother's milk now and then regurgitated. On examination after death, the organs generally were found healthy, but about the end of the jejunum the bowel began to be dilated, and all the lower part of the ilium was enormously distended—the contents being almost entirely gaseous. The large intestine was also much dilated. At the sigmoid flexure there was a slight contraction, so that the rectum itself appeared like a large and separate pouch, and this was full of yellow and fluid fæcal matter. The termination below was a rounded fibrous cord, as thick as a crow-quill, leading to the anus, and there was not more than a quarter of an inch between the lower part of the pouch, which has been described, and the highest point (about a quarter of an inch), to which a probe could be passed through the natural aperture below.

SPONTANEOUS FORMATION OF POISON IN THE HUMAN BODY.

In an article on the nature and treatment of diseases, published in the *Dublin Quarterly Journal* for February 1851, Dr. Graves relates some cases in proof of an opinion formerly advanced by him, that wounds and accidents, affecting external parts, may give rise to symptoms plainly denoting the operation on the constitution of a poison manufactured, as it were, in the injured skin and subcutaneous tissue.

Case i. A healthy female child scratched her nose with a blunt nail. The wound inflamed, and subsequently festered; and in several days the face, forehead, and at a later period the trunk, became more or less covered with an eruption somewhat resembling ecthyma. The child got well in a fortnight, under the local application of soothing remedies, and the internal use of lime-water with milk, which was given to obviate a looseness of the bowels which followed the appearance of the eruption. It is curious that the matter from the pustules infected three of her little nursery play-fellows. As soon as this fact was noticed, the children were separated from each other, and the nascent pustules were checked in their progress by applying a weak solution of nitrate of silver. They all recovered. The case is interesting, as proving not only that an injury may cause the human body to manufacture a poison capable of infecting the constitution of the individual, but that the matter so formed may be capable of infecting, by contact, other persons.

Case ii. Miss G., aged 16, had fever; bed-sores formed on the sacrum and hips, and gave much trouble. Notwithstanding, there seemed to be some chances of her recovery, when, on the twenty-fifth day of her fever, during the nocturnal delirium, she bit off a large piece of her right thumb nail, and injured it to the quick. It inflamed rapidly, and the thumb swelled, the lymphatics of the right arm became indurated, and the whole extremity swollen. After a few days the body was covered with large vesicles, many of which were confluent, and contained an opaque whitish serum: there was also an increase of constitutional irritation and fever. She died on the thirty-second day. In this case it is doubtful whether the poison originated in the bed-sores, or in the injured thumb.

Case iii. In the spring of 1848, Dr. Graves saw a young lady labouring under typhus fever, and who, after a long struggle, was apparently about to undergo a favourable crisis, when suddenly the skin of her scalp, which had been blistered previously, and had healed but imperfectly, became erysipelatous. The disease spread slowly at first to the forehead and eyelids, in which matter formed abundantly, and was after some days let out with a lancet. The erysipelas now extended to the neck and between the shoulders, assuming daily a more unfavourable character, and producing, as it spread, much subcutaneous œdema attended with the formation of sero-purulent matter, as is usual in cases of diffuse inflammation. Her state became rapidly worse; vesicles containing sero-purulent matter formed in her skin, and at last many of her joints, both large and small, became the seat of puriform deposit shortly before death.

Dr. Graves thinks that he has been able to trace many of the symptoms, observed in *rupia cachectica*, and in the worst forms of secondary lues and pseudo-syphilis, to the operation of a poison formed in irritated ulcers, whether in the throat or other parts. Hitherto pathologists have considered these constitutional effects to be the result of a poison introduced into the system from without.

SURGERY.

ABSCESS IN THE NECK FOLLOWING SCARLATINA: RUPTURE OF THE INTERNAL JUGULAR VEIN: RECOVERY.

Dr. R. J. Hale related in this Journal for August 1850, a fatal case of ulceration and rupture of the internal jugular vein, following scarlatina. The following case, of which we abridge the account given in the *Union Médical* for August 24, 1850, is reported by Drs. Dépéret-Muret and C. Boulland of Limoges.

Case. Dr. Dépéret was called, on the 13th February 1850, to see a boy, aged 14, who had had scarlatina for eight days. The only treatment employed had been five leeches to the angle of the lower jaw, on account of intense angina with swelling of the parotid region. The patient, when seen, was suffering from violent inflammation of the pharynx with great tumefaction of the tonsils; and the air passages were filled with mucus, the result of universal bronchitis. A dose of tartar emetic produced abundant vomiting; and this was followed by the ejection of a quantity of pus. On the next day, the voice and breathing were free; there was a little fever; desquamation was proceeding freely.

There was a tumour in the left parotid region, extending from above downwards, from the lobe of the ear to the middle of the neck; in front it reached the anterior third of the lower jaw, and posteriorly it became buried under the sterno-mastoid muscle. It was hard, resistant, tender when touched, and immoveable; it seemed to be deeply buried in the tissues. Fifteen leeches were applied round it, to be repeated the next day; and poultices of flour and linseed-meal were ordered to be constantly worn.

February 18. The general health of the patient was satisfactory. The tumour projected more, and was soft and fluctuating. No abnormal sound was heard on auscultation. A bistoury was introduced at its summit, to the depth of about a quarter of an inch, and gave exit to some thick, creamy, inodorous pus, without any blood. It was recommended to allow the pus to escape gradually; and poultices and emollient lotions were prescribed.

February 21. Up to this date nothing had escaped but healthy pus. On this day, the person who dressed the part, observing a fleshy flocculent plug in the mouth of the wound, attempted to remove it by traction. A large quantity of dark blood immediately escaped; this was immediately arrested by pressure on the orifice of the abscess.

February 22. The whole sac was easily recognised to be full of soft semi-coagulated blood. Venous hæmorrhage had evidently taken place; but it did not proceed from the external jugular vein, which was well defined to the outside of the opening of the abscess. A compress was applied, and kept wet with cold vinegar and water; and the patient was desired to keep quiet, and to resist as much as possible all efforts to cough.

February 23. The swelling was much increased in size; the skin was much inflamed and thinned. No murmur nor expansive movement could be perceived in the tumour: the beating of the carotid artery could be heard distinctly, and the pulse could be felt in the facial and temporal arteries. It was determined to extend the original opening, which Dr. Boulland did to the extent of about three centimètres (1·17 inch). A quantity of half coagulated dark blood immediately escaped. Without loss of time Dr. Boulland plugged the aperture with his finger. He then cut, with scissors, the external wall of the tumour, from below upwards. The blood immediately escaped in great quantity; the patient was nearly in a state of syncope, and cried out that he was dying. Balls of wadding were placed in succession on the part whence the hæmorrhage proceeded, so as to plug the abscess. This arrested the hæmorrhage; and the pressure was maintained by a bandage.

February 26. The most superficial balls were removed: they were impregnated with healthy pus, and with a small quantity of blood, evidently that which had remained in the cavity of the abscess. The dressing was completed by some turns of a bandage round the neck and under the axilla of the opposite side.

March 3. The whole apparatus was removed with much care. When the deepest plugs were removed, dark blood was observed to exude; and the pulsations of the carotid artery were easily observed at the bottom of the abscess. Compression was carefully applied as before.

March 9. The patient was weak, but going on favourably. The dressings were soaked with healthy pus, and were almost entirely reserved. Some rigors, followed by heat and sweating, had appeared at regular intervals, but were successfully combated by sulphate of quinine. There was no vomiting nor diarrhœa, and the catarrhal bronchitis diminished daily.

March 16. The dressings were renewed: no blood escaped.

March 23. The purulent pouch had almost entirely disappeared, leaving only a superficial wound at the seat of the incision.

June 26. The only trace of the injury was a cicatrix at the anterior border of the sterno-mastoid muscle. The movements of the neck were perfectly free. During the whole course of the disease, the cerebral functions had never been for an instant disturbed.

In their remarks, the reporters observe that all the cases of this description, which have been hitherto related, have proved fatal. They refer to the instances related by Dr. Alexander King of Glasgow, Dr. J. C. Abill, and Dr. R. W. Smith of Dublin. To these we may add the case of Dr. Hale, to which we have already referred.

This case was remarkable for presenting no adynamic symptoms, such as are commonly observed to attend abscesses of the neck, complicated with extensive disorganisation of tissues. There was only an acute abscess, containing healthy pus, and giving rise to no complication.

After the hæmorrhage was arrested there was danger:—1. That the brain would be affected by the inability of the blood to return through the compressed vein; and 2. That consecutive phlebitis might occur, which would be even more dangerous than the rupture of the vein. To these sources of danger, mentioned by the authors, we would be disposed to add a third; viz., the entrance of air through the opening in the vein. We are not aware that this has occurred in any of the cases, analogous to the present one, which have been recorded; but we think it quite capable of occurring.

The authors, in conclusion, remark that such cases as these point out that particular attention should be paid to inflammation and abscess of the neck, arising in the course of scarlet fever.

CANCRUM ORIS SUCCESSFULLY TREATED BY THE LOCAL APPLICATION OF CAMPHOR.

Dr. Deutsch of Nicolai, in Upper Silesia, in an essay on noma, published in the *Journal für Kinderkrankheiten* for January and February 1851, speaks highly of the efficacy of camphor as a local application in this disease. It must be observed, that cancrum oris, in Germany, generally attacks the exterior of the cheek, while in England and France the interior of the mouth is the part mostly affected. After briefly referring to the numerous remedies which have been proposed, but which very often fail in producing recovery, Dr. Deutsch observes:

"Under these circumstances I do not hesitate to mention a remedy, the remarkable operation of which has been observed for several years both by myself and by others; I allude to camphor. The mode of application is as follows. The camphor is rubbed and moistened with a few drops of spirits of wine, so as to form a thickish mass, almost of the consistence of ointment.

This is laid, as thick as the back of a large knife, over the whole surface of the noma, and extending at least one-third of an inch beyond. If there be much secretion, the layer must be removed at the end of an hour, and a fresh one applied; if there be less secretion, it may remain on for two or three hours. The first effect produced by this remedy, is an arrest of the degeneration, which remains at a stand for twenty-four hours or more; during this time also the secretion usually loses in part its offensive odour and its acridity. A positive result now appears; the edges of the sore now exhibit a very evident lively-red line of demarcation, secreting pus; and granulations appear. The camphor now need be no more applied to the edge, but only to the more degenerated interior part; the edge must be dressed with an ointment of oil of turpentine and opium. When the granulations have nearly filled the sore, the camphor entirely falls off, and common dressing may be applied."

Dr. Deutsch illustrates his observations by the relation of several cases, in which the treatment proposed by him had been found effectual after other means had failed.

BORAX AS AN APPLICATION TO GANGRENOUS BUBOES.

At the meeting of the physiological and pathological section of the Medical Society of Vienna on June 18, 1850, Dr. Effenberger stated that he had applied a solution of borax, in the proportion of from one to two drachms in a pint of water, to a large number of patients who suffered from gangrenous bubo, with great success. He had had fifty cases in one year; not one had died, although there were several very severe cases, and in one the femoral vessels were laid bare. The solution was applied by means of charpie, so as to cover the edges of the sore. It was very essential that the charpie should be very frequently renewed by night and day; and to the neglect of this precaution, he attributed the failure of this practice in the hands of other surgeons. (*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, Nov. and Dec. 1850.)

SUBCLAVIAN ANEURISM SUCCESSFULLY TREATED BY LIGATURE OF LEFT SUBCLAVIAN ARTERY: APPEARANCES ON DISSECTION A YEAR AFTERWARDS.

This case, which occurred under the care of Dr. J. M. Warren of Boston, U. S., was reported in the *American Journal of Medical Sciences* for January 1849, and an abstract was given in the Digest of this Journal for April 1849, p. 381. To this abstract we must refer our readers for the peculiarities of the case; merely observing that the subclavian artery was found to run obliquely across the neck, parallel with the edge of the trapezius muscle, and in company with the cervical plexus.

In the *American Journal of Medical Sciences* for Jan. 1851, Dr. Warren states that, on Sept. 14, 1848, nine months after the application of the ligature, the patient was quite well, and had perfectly recovered the use of the arm. The aneurismal tumour had in a great measure disappeared, though more prominent than immediately after the ligature of the vessel. On its surface was a large arterial branch, so incorporated with it as at first to give the idea of a return of pulsation in the whole mass, but which by more careful examination could be separated from it. The pulse at the wrist still remained less strong than in the corresponding artery of the other side. The patient was subsequently seized with typhoid fever, from the effects of which she died, after an illness of three months.

On post-mortem examination, no tumour nor other marks were observed at the point formerly occupied by the aneurismal sac. The vessels and nerves were easily exposed, from the great loss of adipose substance. The subclavian artery, from its origin to the internal edge of the scalenus anticu

maintained its original size ; but here it suddenly terminated. From this spot to the aneurismal sac was extended a flat cord, an inch and a half in length, seeming to be composed of little more than condensed cellular membrane. The aneurismal sac had contracted to a bulbous form, and was about twice the size of the vessel in its normal state ; the enlargement suddenly ceasing at the point where the vessel is embraced by the two heads of the median nerve, and the vessel regaining its natural size. On its surface was the supra-scapular artery, in this case a branch of the transverse cervical, greatly enlarged, and which gave use to the apparent pulsations in the tumour before death. The vessels forming the thyroid axis were of twice their natural dimensions. The internal mammary was enlarged, and given off from the thyroid ; it was apparently through this, by means of the inosculations of the intercostals with the thoracic, and of the posterior scapula with the subscapular, that the collateral circulation had been established.

GLANDULAR ENLARGEMENTS IN THE GROIN AND AXILLA OF YOUNG PERSONS; TREATMENT BY CAUSTIC POTASS.

In a paper on Issues and Caustics, published in the *Dublin Quarterly Journal of Medical Science* for February 1851, Dr. B. G. Darley refers to the form of constitutional or sympathetic enlargement of the glands of the groin, frequently met with in young men, and not the consequence of the venereal virus, but rather the effect of a weakened and cachectic constitution. This tumour is very indolent in its nature ; a long time elapsing before suppuration is established, and resolution is not a common termination. Dr. Darley treats these tumours by making a tolerably sized eschar with caustic potash in the early stage, and covering it with a small poultice. The tumour will be found to have disappeared when the eschar separates.

Allied to this is a tumour often met with in the axilla of young persons. A young man applies for advice, with the arm either in a sling or supported by the other hand, and the shoulder depressed and pushed forward ; and there is much anxiety and suffering in his countenance. If this be treated in the common way, we have to wait long before it suppurates ; and if it be opened, only a small quantity of thick pus escapes. The opening will soon close, and the abscess point in another direction, leaving sinuses which are tedious in healing. Dr. Darley treats such tumours by making a small eschar with caustic potash in the very beginning, when they are hard and indolent. They must not be mistaken for the acute abscess frequently met with in this situation, and easily treated by incision.

EXTIRPATION OF THE GLOBE OF THE EYE FOR A NON-MALIGNANT DISEASE.

Mr. A. Prichard, of the Bristol Infirmary relates a case of this kind. The sight of the left eye had been lost for many years, and the patient was harassed with constantly occurring attacks of inflammation, sleeplessness, and intense pain. He attributed the disease to a piece of iron having entered the eye, and which had never been extracted, and which he complained of feeling rolling about from side to side. On a subsequent examination of the eye, no foreign body could be discovered, but the lens had disappeared, and the capsule was collapsed, hard, and opaque. A thick and firm layer of fibrin separated the sclerotic and choroid, through their entire extent, and upon the outer side of the globe of the eye there was a deep oval cavity, as large as a dried horse-bean, and of a very similar form, situated in the middle of the fibrinous exudation. This was probably the cavity of an abscess. This is the first recorded case, as far as is known to Mr. P., in which the eye was extirpated for a disease not malignant. The freedom from the intense neuralgic pain, after the operation, was complete [*Prov. Med. and Surg. Journ.*]

THE HOSPITALS OF LONDON. No. IV.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

THE VITAL STATISTICS OF HOSPITALS.

At p. 181, a very important letter appeared on this subject, by Dr. G. Owen Rees of Guy's Hospital. The topic is adverted to in many communications, which have been sent to us by gentlemen who are interested in establishing an uniform and satisfactory system of registering the recoveries and deaths in the different metropolitan hospitals. Though it would still be premature to decide upon the merits of the various suggestions which have been so kindly forwarded for our assistance, we think that it may be useful to give, in this place, the following extract from a letter received from Mr. J. C. Wordworth, Assistant-Surgeon to the London Hospital. "In addition to the points embraced in the table of Dr. G. O. Rees, cognizance ought to be taken of the time which has elapsed between the admission into hospital, and the death of the patient. In small hospitals, and also in the London Hospital, the deaths soon after admission greatly exceed those occurring within the same period in the larger institutions, and in those which receive few casualties. In the London Hospital, from the great number of severe accidents admitted, the number of early deaths is of course very numerous."

ST. THOMAS'S HOSPITAL.

The following is a list of the medical and surgical staff, with the date of each officer's election.

Consulting Physician. Dr. H. S. Roots.

Physicians. Dr. T. A. Barker ; Dr. H. B. Leeson ; Dr. Risdon Bennett.

Surgeons. J. H. Green, Esq.; J. F. South, Esq.; G. Macmurdo, Esq.

Assistant Physicians. Dr. R. H. Goolden ; Dr. D. W. Cohen ; Dr. T. B. Peacock.

Assistant Surgeons. S. Solly, Esq., F. Le Gros Clark, Esq.; J. Dixon, Esq.

Obstetric Physician. Dr. C. Waller.

Lecturer on Pathology, with Clinical Duties. John Simon, Esq.

Resident Medical Officer. R. G. Whitfield, Esq.

The site of this magnificent establishment was formerly occupied by a convent, founded by Mary Overie, who was the daughter of a ferryman, and took her name from the nature of her occupation, *over rie, over the river*. She endowed this convent with the money she inherited from her father, together with that which she acquired by following the same calling herself. The convent was converted into a college of priests by a noble lady of the name of Swithin, and, after existing above a century, was burnt down in 1212 ; and the temporary building, which was erected during its reconstruction, was afterwards used as an almonry for "indigent children and necessitous proselytes", and dedicated to St. Thomas à Becket. In the fifteenth century, St. Thomas's Hospital was munificently supported by the lord mayor and sheriffs of London ; but in 1538, it was claimed as church property and surrendered to Henry VIII. Its yearly income, at that time, was estimated at £266:17:6. Henry VIII intended to endow St. Thomas's Hospital for the reception of lame, wounded, and diseased soldiers, and it was to have been designated the Hospital of the Holy Trinity ; but his death interfering with this plan, the citizens of London renewed the benevolent design, and, with the sanction of Edward VI, formed a board of inquiry as to the best mode of relieving the miseries of their more unfortunate brethren.

The result, as regards the foundation of St. Thomas's Hospital, was that they purchased of Edward VI the manor of Southwark, which included the site of the hospital, for £647 : 2 : 1. The hospital had been for a short time unoccupied, and was falling into decay, but the citizens repaired and enlarged it in the year 1551, at the expense of £1000, and made it capable of receiving three hundred patients.

In 1552, the following officers were appointed to the hospital, viz. :—A hospitaller, or chaplain, at the annual fee of 10*l.* Clerk, 10*l.* Steward, 6*l.* 13*s.* Butler, 5*l.* Cook, 8*l.* Physicians and chirurgeons, each 15*l.*

About a month before his death, King Edward VI, by royal charter bearing date June 6th, 1553, incorporated the lord mayor and commonalty of the city of London, in succession, as perpetual governors of St. Bartholomew's, Christ's, Bridewell, and the King's Hospital, as this hospital had been designated during this reign ; but it was now styled, "The Hospital of St. Thomas the Apostle".

In 1693 it was found that the hospital was suffering from the ravages of time, and that it would be necessary to rebuild it. Private charity was soon roused to effect this object, and among others, Sir Robert Clayton, lord mayor and president, contributed 600*l.*, and subsequently endowed it by will with 2,300*l.* more ; and Thomas Guy, besides other large donations, rebuilt and fitted up three new wards. By such means the Hospital of St. Thomas became adapted for the reception of the sick, and by the gradual improvements in medical science, became one of the most important schools of medicine in Europe.

It is gratifying to find, that so early as the year 1585 the governors of this hospital set their faces against all jobbing or favouritism in the appointment of their medical officers, as we find by the following minute, dated June 21, 1585. "At this court, Thomas Crowe, son of Wm. Crowe, surgeon, was a suitor for the reversion of a surgeon's room in this house. He was answered that he could have no reversion granted him, for that it is contrary to the orders of this house, but if he be a suitor when any shall fall, and he shall be known to be a fit and able man to take upon him such a charge, that then he shall be favourably considered."

It appears that the surgeons of St. Thomas's were early among the most distinguished members of the profession, holding the office of serjeant-surgeon to the reigning monarchs. In 1641, Edward Moline, one of the surgeons to this hospital, was sent for to York by Charles I, to attend him in sickness ; but, in 1643, he paid dearly for this distinction ; for the president, treasurer, and governors, received an order from the honourable House of Commons then assembled, to displace Edward Moline, one of the chirurgeons of St. Thomas's, from his said place ; for that he was lately taken at Arundel Castle in arms against the Parliament, and for the placing of one Mr. King Clure, chirurgeon, in his place. This said order was read and considered, and in obedience thereunto, "this court doth now order", say the minutes, "that the said Edward Moline shall be and is hereby discharged and displaced from his place as surgeon, but as touching the placing of the said King Clure in the place of the said Edward Moline, it was now also agreed that (before election of a surgeon into the said place) a petition should be drawn and presented to the same honourable House of Commons by the president and governors of this house, to grant their favour, and permit them to confirm Mr. Thomas Hollyer, chirurgeon, who, for fourteen years together, hath him exercised in this hospital, and was formerly a servant to an ancient surgeon of this house, and by the appointment of the said governors, in the absence of this Edward Moline, hath supplied his place for eighteen months this last past". The result of this petition was, that the governors were left to their free election, and Thomas Hollyer was elected accordingly, at a salary of 65*l.* per annum : this sum being granted to him on the following considerations :—for ordinary cures, 40*l.* ; for cutting for

the stone, 15*l.*; and for curing scalled heads, 10*l.* In 1660 King Charles II sent a letter to the president, treasurer, and governors, on behalf of his friend Edward Moline; whereupon the court, after a long debate, "willing to yield all due obedience to his majesty's royal pleasure, and yet withall not to bring a new charge upon this house by employing four surgeons, doth declare that the said Edward Moline be readmitted to his place of a surgeon of this house, as to the cutting for the stone and other ordinary cures, and that the pay of the other surgeons be divided with him until a vacancy should occur, then the number to be again reduced to three". As Mr. Moline, however, was not satisfied with this arrangement, the court eventually resolved that he should be freely and unconditionally restored to his office; and Mr. Hollyer was made a fourth surgeon, with full pay.

The ignorance of the medical profession in the sixteenth century is generally acknowledged, and a very striking proof was exhibited by the difference of opinion which prevailed among the fourteen royal physicians as to the nature of the fatal malady by which Charles II was carried off. The majority of them considered the attack to be apoplectic, but some thought it to be a fit of epilepsy, while others determined to call his complaint a fever, and to administer bark. But, ignorant as the physicians undoubtedly were at this period, it would appear that the surgeons were deemed to be still more so, and they were even forbidden to prescribe, as we find by the following minute in the year 1689. "Ordered that the ancient rule of this hospital, that no chirurgeon shall give any physic to any patient admitted into this house, but that the doctor alone be left to prescribe physic to all patients, be confirmed, and for the future strictly observed". It is, however, curious that, notwithstanding this restriction to the usefulness of the surgeons, we find their important services admitted in the following resolution, passed in 1691. "We are also of opinion that *one* doctor, and *three* surgeons, are sufficient for the service of the hospital".

In the year 1702, the pupils of the hospital are alluded to, under the name of *cubbs*, and we find an order limiting the number of four *cubbs* to each surgeon. This rule continued in force until 1760, and then it was abrogated only in consequence of the example set by other hospitals, as we find by the following resolution: "That as other hospitals are unlimited in the number of their pupils, it be so at the hospitals of St. Thomas's and Mr. Guy's."

To one of the surgeons of St. Thomas's Hospital is due the honour of having first established an HOSPITAL ANATOMICAL SCHOOL. The barber-surgeons of that day were in the habit of giving lectures on "anathomy" in their own hall, but they forbade the pursuit of private "anathomy"; but William Cheselden braved their edicts, and gave lectures on anatomy within the walls of this hospital. In process of time, it would appear that not only were pupils admitted to see the practice of the hospital, but some measures were adopted for securing their attendance, and we accordingly find the following minute made Jan. 27, 1737: "The three surgeons of this hospital having attended according to the directions of a former committee, and upon hearing the account of the manner of examining and certifying for their pupils in this hospital, and looking into the printed form of certificates;—it is ordered that the word 'diligently' in the printed form be left blank in order to be inserted or left out as the occasion shall require."

In 1760, it appears from another minute that pupils were admitted, under proper regulations, to witness the practice of both the Borough hospitals, after they had duly entered at either. It is a pity that these magnificent institutions are not combined, at least so far as medical teaching is concerned. Were they united in this way, and were the teachers well paid from the ample resources at command, and selected solely on the ground of pre-eminent merit, a greater medical college would be the result, than any now existing in London or elsewhere. The continuation of our history we must reserve for another occasion.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

Consulting Physician. Dr. Farre.
Consulting Surgeon. John Dalrymple, Esq., F.R.S.
Physician. Dr. F. J. Farre.
Surgeons. Gilbert Mackmurdo, Esq., F.R.S.; James Dixon, Esq.; George Critchett, Esq.
Assistant-Surgeons. William Bowman, Esq., F.R.S.; Alfred Poland, Esq.

NOTICE OF THE TREATMENT OF CERTAIN CASES OF ENTROPION BY MEANS OF COLLODION. REPORTED BY J. CUMMIN TOSHACH, ESQ.

Collodion has been used at this hospital almost ever since its introduction as a surgical dressing; and though we believe it has been employed in the treatment of certain examples of entropion in other quarters, and perhaps independently, we hope the following notice of so useful an agent will not be deemed out of place, especially as it has been shewn in a variety of instances to be a perfect substitute for the somewhat severe operations, to which patients have hitherto been content to submit for the relief of this most troublesome affection. If we mistake not, it was Mr. Ledger, the intelligent house-surgeon of this hospital, who first suggested its employment to Mr. Bowman, in whose practice we have chiefly witnessed its powers.

The most frequent cases of entropion are those affecting the lower lid in elderly persons suffering from ophthalmia. The spasm of the orbicularis, the forcible squeezing together of the lids, occasions an inversion of the lower one, owing to the relaxation of the integument. The inversion having once taken place, tends immediately and directly to aggravate the ophthalmia and the irritability of the organ, and this to perpetuate and increase the entropion. If the inversion is slight, the margin of the lid is turned against the globe, and the lashes lie flat upon the sclerotica and cornea, rubbing the conjunctiva, but often with less irritation than might be expected, and always with less than is occasioned by that inversion or displacement of the cilia in which their free ends are pointedly turned against the eyeball. If the inversion be still greater, the ciliary border is turned completely over, so that the cilia are bent under and are received as it were against the mucous surface of the lid, in the sulcus which always exists along the lid in consequence of its being rolled inwards upon itself. In this position they give less pain, but in both conditions they constitute a serious source of discomfort, and prevent the cure of the ophthalmia. If allowed to remain for any length of time, they often lead to opacities of the cornea and other secondary disorders.

In this form of entropion an operation has commonly been required, and that now commonly resorted to, consists in removing a horizontally elliptical piece of the integument close to the ciliary border, and closing the gap by fine sutures. Other modes of fulfilling the same indications have been adopted with more or less success, and when patients have been unwilling to submit to any of them, the best substitute, and that a most inefficient one, in many cases, has been the fixing the lid in place by means of a piece of adhesive plaster, which is often difficult of retention, and always unsightly.

The following cases, which are among those that have been treated by Mr. Bowman, will show that the Collodion, properly applied, affords not merely temporary but permanent relief in this variety of entropion.

Case I. J. P., æt. 61, female, presented herself at the hospital, for what she called a cold in the left eye, which had existed twelve or fourteen days, and for the relief of which she had been under treatment at another hospital, where she had given her some eye-water. After attending several times without benefit she applied here. On examining the eye, Mr. Bowman found that the ophthalmia was dependent on an entropion of the lower lid, it being just sufficiently inverted for the cilia with their convex surfaces to rub against the ocular conjunctiva. Mr. Bowman, on turning his attention to the right eye, observed that there was in this eye also an entropion, but

without much accompanying ophthalmia: the inversion in this eye being complete, the cilia were not rubbing against and irritating the conjunctiva, but were lodged in a longitudinal sulcus extending the whole length of the lid, and corresponding to the attached border of the tarsal cartilage.

For the relief of the ophthalmia in the left eye, collodion was applied to the lower lid, in the manner and with the precautions to be presently mentioned. It was also applied to the right lower lid, to restore it to its natural position. No other remedies were employed. She left with directions not to rub the collodion off; and in two days afterwards the patient came with the ophthalmia in the left eye quite well, and no inversion. On the right side, the tendency to inversion was much diminished, and the collodion was applied again. This application was successful.

Case II. J. L., ætat. 70, an old man, was to have an artificial pupil made in his right eye. On presenting himself for operation, it was found there was an entropion of the lower lid, and considerable concomitant ophthalmia. In this state of things, it was impossible to think of proceeding with the artificial pupil. Collodion was therefore applied to the lower lid, and the patient, living some distance out of town, was told to return in a week, which he did; when the ophthalmia had entirely ceased, and the entropion was no longer present. After being in the hospital two or three days, the artificial pupil was made, without any undue inflammation following the operation. In this case, had the collodion not been used, it would have been requisite to have removed a portion of skin, as in the ordinary operation for entropion, previously to attempting to make a new pupil; but by a very simple means surgical interference was obviated, and a painful proceeding, often submitted to with reluctance, was rendered unnecessary.

In the following case it failed, through the neglect of the patient to have it replaced at the proper time.

Case III. R. M., æt. 70, had had entropion of the right lower lid for six weeks, with ophthalmia, when the collodion was applied on the 24th March, 1850. On the 4th April it still adhered effectively, and the inversion was prevented. He did not come again till the 18th April, when the collodion had been displaced several days, and the eutropion had returned. It was then replaced, and also on the 2nd and on the 9th of May; and for the time gave complete relief. After this he stayed away three weeks, during which the entropion returned under a fresh attack of ophthalmia; and as there was no prospect of his being able to come at more frequent intervals, to have the treatment efficiently carried out, Mr. Bowman recommended him to submit to the removal of a piece of the integument in the ordinary way, to which he readily consented, and by which he was cured.

There are other cases of entropion, the result of aggravated or long continued ophthalmia, with much photophobia and lacrymation. The following examples will show that these also are amenable to the collodion treatment.

Case IV. S. L., æt. 39, female, states that five months prior to applying to this hospital (January 20, 1851), her eyes became suddenly bad; that she had been under treatment all that time without any benefit. The right eye was the worst, in which she states there had been an inversion of the lower lid since the commencement. She has at present great intolerance, and profuse lacrymation. There is an opacity covering the upper part of the cornea of the right eye. When she first presented herself she was ordered a blister behind the right ear, and some lead lotion. On the 27th, collodion was applied to the right lower lid. On the 30th, she came back, with the collodion displaced and the entropion restored; but the collodion was reapplied on that day, and on three occasions afterwards, at intervals of three days; when, on the 10th of February, she is much improved; and on the 24th of March she comes with the entropion cured, the opacity of cornea alone remaining. From the 27th of January she had been taking gr. j of quinine twice a-day.

For the following we are indebted to Mr. Bowman's notes of cases in private practice.

Case v. 19th December. Miss ——, æt. 13, from the age of six has suffered twice annually from an attack of ophthalmia, with intolerance. For the last three years has had constant and extreme intolerance, so as hardly ever to open the eyes. Skin cold; pulse languid. Is thin, and grows fast. Bark does not agree with her. Has taken steel and various remedies, under different practitioners. On examination, the right lower lid is found inverted, the left conjunctiva is red in parts, but neither globe can be rendered visible. Tincture of iodine on outside of lids. Cod-liver oil 3 j to 3 iv twice daily. Exercise three times a day in all weathers, well clad. A brine bath at 70 degrees F. every morning, followed by friction. Plain nutritious diet.

January 15. Is much better in health. Spirits and complexion better, and is more muscular. The right lower lid is still inverted, but the eyes are more often open for an instant, and are less injected. I got a view of the two corneæ: the right nearly clear, slightly rough at the margin; the left a little rough and dull near the pupil. Her mother says they have not been seen for two years before. To continue the same treatment.

January 25. The amendment continuing, and the spasm and photophobia lessened. I put collodion below the tarsal border of the right lower lid, averting the lashes.

February 13. The entropion was cured by a single application of the collodion. When the collodion came off at the end of a week, the inversion once showed a tendency to return; but the lid was immediately 'righted' by the mother, and no further displacement has occurred. Rep. Syr. Fini Iodid. 3 j twice daily.

March 12. The entropion appears quite cured. Her general amendment goes on under the same remedies.

In the application of collodion for the relief of entropion, certain precautions are to be observed; otherwise it may fail in its intended effect.

1st. The collodion itself should not be too dilute. It should be thick and syrupy; in short, it should be concentrated.

2nd. Care should be taken that the surface on which it is to be applied is properly *dry*, and free from any moisture: therefore it is always necessary to wipe the surface before application; otherwise it will not adhere with any degree of firmness, but will soon fall off. With attention to the above caution, it adheres very firmly. There are, however, many cases in which the outer surface of the inverted lid is excoriated by constant wetting by the tears; in which it is desirable to delay the application till this worst state is relieved. A few days are usually sufficient for this purpose.

3rd. During the application, and while evaporation is going on, the position of the head should be attended to. The vapour may irritate the conjunctiva, and a slight increase in the flow of tears take place. To prevent these flowing on to the collodion at the time of its application, it is necessary that the head be inclined to one side, so that the tears may drop from one corner of the eye, and not run over the lid and cheek.

It does not seem very important how much of the integument is covered by the collodion, so long as the contraction is sufficient to remedy the inversion; and the best way to judge of this, is to bring the lid into place, and raise the skin from the cheek towards the tarsal border, before commencing the application of the collodion. It is necessary to apply it close up to the ciliary border, in order to produce the contraction along that border. If this be done, it is less essential to smear it far down towards the cheek. Where the integument is very lax, a very considerable surface of it may be covered.

With these precautions in view, the application is proceeded with as follows. The lid being restored to its natural position, it is held there while the collodion is being applied, by making gentle traction outwards on the integument below the outer canthus. In this way the skin of the lower lid is horizontally grooved, while at the same time it is left exposed, so as to be free to receive the collodion. It should be held in this way till the collodion has contracted at least to such a degree as may be sufficient to maintain the

right position of the lid during the further stages of the contraction. Very often one application of the collodion is sufficient to cure an entropion; but if a tendency to return manifests itself, it must be repeated at intervals of three or four days or a week.

It must be remembered that the collodion is not proposed as a cure for every case of entropion. In those forms which depend on contracted cicatrices or a distorted cartilage, when the tarsal edges may be irregular or much thickened, the ordinary modes of cure by operation must still be resorted to, but confining the treatment by collodion to those forms which are recent and uncomplicated with serious structural change, it will be found that it is an invaluable means of remedying a great and troublesome deformity.

[The historical notice of this hospital, the oldest and largest of the ophthalmic hospitals of this kingdom, is necessarily deferred to a future occasion.]

MISCELLANEOUS INTELLIGENCE.

Sale of Arsenic Regulation Act. The principal provisions of this Act, which was introduced by the Earl of Carlisle, and has recently passed, are as follows. The seller of any quantity of arsenic must enter in a book, kept for the purpose, the name and residence of the purchaser, and the purpose for which he alleged he wanted the article: the purchaser must also, in all cases, sign his name, and, except in certain cases, the arsenic should not be sold except in presence of a witness. With the view of preventing accidental poisoning, it has been proposed to add some foreign colouring matter to the arsenic, so that it may not be mistaken for flour, meal, carbonate of soda, or the like. But as the introduction of foreign matters might interfere with some of the purposes to which arsenic is applied in arts and manufactures, it is determined that no person shall sell less than ten pounds weight of uncoloured arsenic, unless it were stated by the purchaser that he wanted it for some purpose in which the introduction of an adventitious colour would be injurious. It is proposed that soot be employed as the colouring matter. *Arsenic is to be sold to none but male adults:* and where less than ten pounds of uncoloured arsenic is required, there must not only be the signature of the purchaser, but also the presence of a witness known to the seller.

APPOINTMENTS.

Elin, George, Esq., appointed House-Surgeon to the Birmingham General Hospital.

Hutton, Dr. Charles, elected Physician-Accoucheur to the General Lying-in Hospital, York Road, in the room of Dr. James Reid, resigned.

Lonsdale, E. F., Esq., appointed Surgeon to the Orthopædic Hospital.

OBITUARY.

Allan, James, M.D., Deputy Inspector-General of Hospitals and Fleets, Surgeon to Haslar Hospital, at Portsmouth, aged 58, on 18th March.

Bowie, John James, M.D., at Bentinck Terrace, Regent's Park, aged 31, on 12th March. He was for several years one of the Assistant Physicians to the Hospital for Consumption at Brompton, but resigned his office about a year ago, in consequence of ill health. His disease was phthisis pulmonalis, though at first it assumed a different character.

Inglis, James, M.D., formerly Physician to the Ripon Public Dispensary, at Green Royde, near Halifax, aged 37, on 8th March, of disease of the heart.

BOOKS RECEIVED.

Acton on Diseases of the Urinary and Generative Organs. Second Edition. London: 1851. Battersby (Dr. F.) on Chronic Hydrocephalus. (From *Edinburgh Med. and Surg. Journal.*) Edinburgh: 1851. Bird (Dr. Golding) Urinary Deposits. Third Edition. London: 1851. Cotton (Dr. R. P.), on Phthisis and the Stethoscope. London: 1851. Index to first thirty-three volumes of Medico-Chirurgical Transactions. London: 1851. Lallemand on Spermatorrhœa:

translated by McDougall. Second Edition. London: 1851. Neligan on Medicines. Third Edition. Dublin: 1851. Non-Medical Essay on Cholera. London: 1851. Pharmacopœia ad usum Nosocomii Phthisicorum, etc., accommodata. Londini: 1851. Pharmacopœia Collegii Regalis Medicorum Londinensis. Londini: 1851. Religion and Science, Connexion of, and Independence of each other. Manchester: 1851. Robertson on the Physiology and Diseases of Women; and on Midwifery. London: 1851. Snow (Dr. John), Letter to Lord Campbell on the Chloroform Clause in the proposed "Prevention of Offences Bill". London: 1851.

TO CORRESPONDENTS.

TYPHUS AND TYPHOID FEVER.

To the Editor of the London Journal of Medicine.

Hull, March 6, 1851.

Sir,—I was under a mistake, it appears, in ascribing to Dr. Wm. Jenner the opinion, that "occasionally, though very rarely, in typhoid fever with the rose rash, the follicular lesion is wanting". Nevertheless, I believe the opinion, apart from *his* authority, to be correct. As Dr. Watson distinctly asserts the same pathological truth, I think it probable I may have had the following passage from his Lectures in my mind, which I inadvertently confounded with the statements of Dr. Jenner. After describing the *spotted* or *rubeoloid* epidemic fever of 1838, Dr. Watson adds,—"I have looked for them (ulcers in the bowels) in many cases that have proved fatal in the Middlesex Hospital, and have discovered *neither ulceration nor any other apparent change in the follicles of the intestines. Still, in my own experience, such ulcers have been vastly more often present than absent.*" (*Watson's Lectures on the Practice of Physic*, 1st ed., vol. ii, page 689.) By inserting this explanation in your next Journal, you will much oblige,

Sir, yours faithfully, Humphry Sandwith.

Physician to the Hull Infirmary.

Pneumonic Paralysis. We have received the following letter from Mr. Thos. Underhill, Jun., and shall be glad to receive information on the same subject from those who have it to give.

To the Editor of the London Journal of Medicine.

Tipton, Staffordshire, 27th February, 1851.

Sir,—I have read with much interest in the London Journal of Medicine for this month, p. 163, your account of Dr. Macario's paper on what he terms "Pneumonic Paralysis"; and as the two cases recorded in that paper are very similar to one which has lately occurred in my practice, I am induced to forward to you the following notes.

Richard ——, aged 44, a labourer, of delicate constitution and nervous temperament, was seized on the 20th December, 1850, with acute pneumonia, commencing in the lower part of the left lung, and rapidly involving the whole of that organ. The symptoms soon assumed a typhoid character, as was anticipated from the constitution of the patient and the extent of the disease. There was some, but not much, delirium. I applied a large blister to the affected side; and in other respects adopted the ordinary treatment. On the 27th, he was decidedly convalescent. On the 28th, I found the improvement going on; he said that he had slept well, perspired freely, and expectorated copiously. There was a very distinct subcrepitant rhonchus. When I proceeded to feel his pulse, *he gave me his right arm, telling me at the same time that he could not move the left;* and that he supposed he had lain upon it. Upon examination, I found that the left arm was completely paralysed. He had no giddiness and no headache. Sensation was not impaired in the hand or arm; there was neither a feeling of numbness, nor of tingling; but when I raised the arm, it fell back upon the side like a dead weight. I directed daily friction of the limb with a stimulating liniment. On the 6th of January, 1851, he was able to walk about within doors; and with the exception of complete persistence of the paralysis as described, he was going on most favourably. On the 12th of January, he announced to me that he was able to move his fingers. On the 16th he could move the wrist-joint, though with difficulty; on the 20th he could bend the elbow. The arm gradually got stronger; and on the 20th of February he resumed his ordinary occupation.

I do not offer any remarks upon the complication of the pneumonia with paralysis. The relation (if any) between the two affections can only be solved by those who have large opportunities in hospitals of observing the former disease.

I am, Sir, your obedient servant, Thomas Underhill, Jun., M.R.C.S.Eng.

LONDON JOURNAL OF MEDICINE,

A MONTHLY

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MAY 1851.—No. XXIX.

ORIGINAL COMMUNICATIONS.

ON IRRITABLE UTERUS.

By F. W. MACKENZIE, M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

A PAINFUL condition of the uterus, when not occasioned by displacement, inflammation, or any appreciable organic disease, constitutes the *hysteralgia* of some authors, and the *irritable uterus* of Dr. Gooch. It is met with in practice in various degrees of intensity, from slight uneasiness to a disease characterized by the most excruciating suffering. In its severest forms it is comparatively seldom met with; but, otherwise, it cannot be regarded as an unusual disease. Although it would essentially appear to consist in a mere lesion of innervation, and to be a very simple and remediable disorder, it is often found to be the reverse; and in some instances has baffled the resources and the ingenuity of the most experienced physicians. I propose, in the present communication, to draw attention to some facts which have come under my observation in relation to this disease, and to submit such inferences as appear to me to be deducible from them.

The slighter forms of this malady are characterized by pain in the uterine region, increased by standing or walking, and somewhat relieved by lying down. The pain extends, or rather radiates from the uterus to the groins, hips, thighs, and loins. A sensation of bearing down of the womb is often felt; there is frequently leucorrhœa and sometimes dysmenorrhœa. On a digital examination, the uterus is found to be extremely sensitive to the touch, but it is neither displaced, nor perceptibly diseased. The constitutional derangement attending this uneasiness is seldom of a febrile character; on the contrary, the general health is for the most part depressed, the circulation is languid, the pulse feeble, and the condition of the nervous system is that of weakness and irritability. The digestive organs, so far as I have observed, are seldom unaffected; they are generally in an irritable and disordered condition, and their secretions are either faulty or deficient. On inquiry into the antecedent circumstances of the patient, it

will often be found that she has suffered from severe mental affliction, trouble, or uneasiness, or has experienced some sudden fright or emotion, or else that she has undergone physical privation or fatigue; and that, as a consequence of these, spinal irritation and anæmia, in various degrees, have resulted. This latter condition is an almost constant concomitant, as well as antecedent of the malady; and, judging from the history of the cases which I have collected, would appear to be its principal predisposing cause.

The more severe form of this disease has been very graphically described by Dr. Gooch. He remarks that a patient, suffering from irritable uterus, complains of pain in the lowest part of the abdomen along the brim of the pelvis, and often also in the loins. The pain is worse when she is up and taking exercise, and less when she is at rest in the horizontal posture. If the uterus is examined, it is found to be exquisitely tender. As soon as the finger reaches, and is pressed against, the uterus, it gives exquisite pain; this tenderness, however, varies, at different times, according to the degree of pain which has been latterly experienced. The neck and body of the uterus feel slightly swollen; but this condition also exists in different degrees; sometimes being sufficiently manifest, sometimes scarcely or not at all perceptible. Excepting, however, this tenderness, and the occasional swelling, or rather tension, the uterus feels perfectly natural in structure. There is no evidence of scirrhus in the neck; the orifice is not misshapen, nor are its edges indurated. The circulation is but little disturbed; the pulse is soft, and not much quicker than is natural, but it is easily quickened by the slightest emotion. In a few instances, however, there has been a greater and more permanent excitement of the general circulation. The degree in which the health has been reduced has been different in different cases. A patient who was originally delicate, who has suffered long, and has used much depletory treatment, has been, as might reasonably be expected, the most reduced. She has grown thin, pale, weak, and nervous. Menstruation often continues regular, but sometimes diminishes or ceases altogether. The functions of the stomach and bowels are not more interrupted than might be expected from the loss of air and exercise; the appetite is not good, and the bowels require aperients; yet nothing more surely occasions a paroxysm of pain than an active purgative. Such are the leading symptoms of this distressing complaint. To embody them in one view, let the reader imagine to himself a young or middle-aged woman, somewhat reduced in flesh and health, almost living on her sofa for months or even years, suffering from a constant pain in the uterus, which renders her unable to sit up, or to take exercise;—the uterus, on examination, unchanged in structure, but exquisitely tender, even in the recumbent posture; always in pain, but more or less frequently subject to great aggravations.

With regard to the pathology of these cases, Dr. Gooch observes, that the causes, to which this disease has been attributed, are generally considerable bodily exertion at times when the uterus is in a susceptible state; but he remarks, that the patients had previously manifested signs of a predisposition to it. They were all sensitive in body and mind, and many of them had previously been subject to painful menstruation. As to its proximate nature, he is satisfied by stating

that it consists in a morbid condition of the uterine nerves, attended by pain, and sometimes vascular fulness; and he likens it to the irritable breast, the irritable testis, and the painful condition of the joints which is sometimes met with in hysterical females. He does not venture to explain its pathology any farther.

A consideration of the cases of this disease which have come under my notice, appears to me to justify the following conclusions:—

First. That, in the majority of instances, irritable uterus is rather a sympathetic than an idiopathic disease of that organ.

Secondly. That it is sympathetic of irritative disorder of various organs with which the uterus has intimate relations, the irritation of which is reflected, either partially or entirely, upon the uterine ganglia and nerves.

Thirdly. That, whilst such reflected irritation is its immediate cause, it is remotely dependent upon a defective condition of the blood, which would appear to operate by producing a morbidly irritable state of the nervous system generally, and of the uterine ganglia and nerves in particular.

In support of these views I shall quote the following cases.

Case I. Mrs. E. Nurden applied at the Paddington Free Dispensary, Sept. 20, 1850, suffering from pain in the region of the uterus, increased by standing or walking, and relieved by lying down. The pain radiated from the uterus to the groins and hips, and sometimes extended down the thighs. She had also a good deal of pain in the back and loins, and suffered much from bearing-down of the uterus. The pain varied in intensity, and was sometimes very severe. Menstruation had always been very painful. The os and cervix uteri were very sensitive to the touch, but not otherwise diseased; nor was the uterus displaced. She had suffered from these symptoms for upwards of twelve months. Previously to their accession she had not been in good health; she had been weak, and incapable of undergoing much fatigue. Her tongue had been for some time habitually furred in the morning; her appetite had been bad, her digestion attended with pain, and her bowels confined. She had had a great deal of trouble and anxiety, and was, when first seen, very weak and anæmiated. There was a loud venous bruit in the neck; her tongue was furred, and the digestive organs were disordered. The lower part of the spine was extremely tender on pressure.

The treatment which I recommended had especial reference to the abnormal condition of the blood, the disordered state of the stomach and digestive organs, and the irritable condition of the spine. I directed her to take ten grains of the ammonio-citrate of iron after each principal meal daily, and five grains of blue-pill every second night until the tongue became clean, with sufficient castor oil the following morning to insure a moderate action of the bowels.

October 22nd. She reported herself to be better: she felt stronger, the appetite was better, the tongue cleaner, and her bowels more regular. She had still, however, a great deal of uterine pain, and the lower portion of the spine continued very tender. The dose of the citrate

of iron was increased from ten to twenty grains, and she was directed to rub the lower portion of the spine with an ointment containing tartar emetic and croton oil, night and morning, until pustules were produced.

October 29*th*. She reported herself to be still better. The uterine pain was much less, and her general health was improved; but she had a good deal of leucorrhœa. The ammonio-citrate of iron was ordered to be discontinued; and, in its place, a draught containing fifteen drops of the diluted muriatic acid, twenty of the tincture of the sesquichloride of iron, and a drachm of the solution of bichloride of mercury, was directed to be taken three times a day.

November 26*th*. She was perfectly well. The medicine last prescribed, having agreed with her, had been regularly taken, and the counter-irritation, over the spine, had been also continued. The pain and irritability of the uterus was now entirely gone, as was also the leucorrhœa; her tongue was clean, and the digestive organs healthy. She stated that the counter-irritation, over the spine, gave immediate relief as regarded the uterine pain, which entirely ceased with the improvement of her general health.

Remarks. The circumstances which I have adverted to as productive of the irritable uterus, existed in a marked manner in the present case. The patient was extremely anæmiated on admission, and had probably been so for a considerable period; she had also undergone much mental anxiety and trouble; and these circumstances sufficiently explained the occurrence of dyspepsia, and an irritable condition of the spine, which may be regarded as having been the immediate cause of the uterine derangement. They were certainly antecedent rather than consecutive to it; and the uterine pain disappeared, without any special treatment, under measures calculated to remove them.

Case ii. L. Fross, aged 36, single, applied at the Paddington Free Dispensary, November 26, 1850, suffering from much pain in the uterus, and occasional bearing down. The pain varied in intensity at different times, and occasionally was very intense; it was sometimes relieved on lying down, but was not entirely removed. She had leucorrhœa, which was increased whenever the uterine pain was very severe. Menstruation was regular, but was attended with much suffering, which at times was so great as to make her apprehensive of the existence of inflammation. These symptoms were attended, and had been preceded by general weakness, and a depressed state of the general health. The patient was now extremely anæmiated; a loud continuous bruit was heard over the jugular veins. The tongue was habitually furred, and the stomach and bowels disordered. The lower part of the spine was also tender upon pressure. She stated that she had suffered from uterine symptoms for many years, and that she had consulted several medical men without obtaining much benefit. She was a sempstress by occupation, and had led a very sedentary life. The treatment which I recommended her was principally the following: to take an alterative dose of blue-pill every second night, as long as the tongue was unpleasant on awaking in the morning; to take the muriated tincture of iron three times a day with dilute muriatic acid, and with each dose a drachm of the solution of the bichloride of

mercury; the bowels to be regulated by castor oil, and the spine to be rubbed with tartar emetic ointment, night and morning, until pustules were produced.

December 17th. She was much better. The tongue was clean, the appetite good, the bowels regular, and she felt generally stronger. The uterine pain was much less; the leucorrhœa entirely gone. She stated that the uterine uneasiness ceased as the pustules appeared over the spine. She was directed to omit the muriate of iron, and take simply twenty grains of the ammonio-citrate of iron after each principal meal daily.

January 31st, 1851. She was perfectly well, and had no uterine pain nor leucorrhœa. The tongue was clean, the appetite good, and the bowels regular. Her menstruation took place a fortnight ago with scarcely any pain.

Remarks. This patient also was very much anæmiated; and, judging from the history of her case, had been so for some time. Again, her digestive organs were disordered, and the spine was tender upon pressure. It cannot, I think, be doubted that these conditions were consequent upon a state of mental anxiety which is almost inseparable from an occupation, which is precarious and ill-requited, and which requires late hours and a sedentary mode of life; and that upon these the uterine disorder had supervened. The treatment, therefore, was addressed to them rather than to the uterine malady; and the result proved that this view was correct. The existence of rather profuse leucorrhœa required special attention; for although it was probably a consequence of constitutional disorder, its continuance would operate unfavourably upon a patient who was evidently anæmiated. On this account the acidulated muriated tincture of iron was given in preference to any other chalybeate: and it had the effect in this, as in many other cases with which I have met, of entirely removing this symptom. The ammonio-citrate of iron was then substituted, in full doses, after each principal meal daily. The result of the treatment tends to show that, in this case, the uterine disorder was a symptomatic affection, inasmuch as it ceased, without any special treatment, on removing the constitutional derangement with which it was accompanied.

Case iii. Mrs. Woodger, aged 36, was seen Nov. 28th, 1850. She was suffering from violent pain in the uterus and left iliac region; she had also pain in the back, and a sensation of bearing-down, or forcing of the uterus. The pain extended to the hips, and sometimes darted down the thighs. It varied in intensity at different times, sometimes being very acute, and sometimes of a more subdued character. On a digital examination, the uterus was extremely sensitive; the slightest touch of the cervix produced great suffering; otherwise it was not perceptibly diseased, congested, or enlarged. These symptoms had been preceded, and were accompanied by a very flatulent state of the bowels, furred tongue, loss of appetite, and other symptoms of derangement of the digestive organs. The patient was also thirsty and feverish, but otherwise her general condition was that of weakness and depression. On inquiring into the history of the case, I found that she had lost her mother twelve months ago; that this had affected her very much; and that she had ever since been in

a nervous bad state of health. In July she had been confined; and, although the labour was easy and natural, and unattended by any unusual hæmorrhage, she had been seized, a fortnight afterwards, with considerable pain in the uterus, evidently of a neuralgic character, which was removed by soothing and sedative measures. The present attack was also apparently neuralgic; and it appeared to depend immediately upon disorder of the chylopoietic organs, together with spinal irritation, whilst remotely it was connected with the painful state of mind, and depression of the nervous system, which had been occasioned by the death of her mother. The indications which I proposed to fulfil, in regard to treatment, were, first, to correct the disordered condition of the stomach and bowels; secondly, to allay the morbid irritability of the nervous system; and thirdly, to remove the spinal irritation. For these purposes she was ordered three grains of calomel immediately, and afterwards the sulphate of magnesia in decoction of aloes and cinnamon-water, at intervals until the bowels were properly opened; to have a linseed-meal poultice applied over the abdomen, and a sinapism over the lower part of the spine, and to take, at bed-time, five grains of Dover's powder.

The next day the pain was lessened; the bowels had been much purged, were less flatulent, and the tongue was cleaner. There was still, however, much uterine pain, and the spine continued very tender on pressure. In consequence of this, the lower part of the spine was ordered to be rubbed with the tartar emetic ointment night and morning, until pustules appeared; and she was directed to take five grains of Dover's powder at bed-time, if in pain, or incapable of sleeping.

In the course of a few days, the spine became irritated by the ointment; and, upon this taking place, the uterine pain entirely ceased, and all that she complained of was weakness and loss of appetite. For this she was given the diluted nitro-muriatic acid, in water, three times a day before meals, and she was ordered a nutritious diet. No other treatment was required from this time. She progressively got better; her appetite improved; she got strong, and has had no return of uterine pain up to the present time.

Remarks. The predisposing cause, in this case, appeared to be the generally depressed state of the nervous system, which was occasioned by the mental uneasiness induced by the death of the patient's mother; and to this state of mind we may, I think, attribute the spinal irritation which was so prominent a feature in the case. Nor can it be doubted that this, together with some casual derangement of the stomach and bowels, was the exciting cause of the uterine malady. The antecedent circumstances of pregnancy, parturition, and suckling, would also favour its occurrence, by weakening the constitution, and rendering the nervous system more susceptible to impression. The ready cessation, however, of the uterine disease on correcting the disorder of the digestive organs and the irritable condition of the spine, proves that it was symptomatic, and that it did not depend upon idiopathic disease of the uterus.

Case iv. Elizabeth Morgan, aged 21, married, but having no children, applied at the Paddington Free Dispensary, suffering from ex-

treme pain in the uterus. The pain extended to the groins and hips, and was always relieved by lying down. The uterus was very sensitive to the touch, but not otherwise diseased. She complained of much pain and dragging at the back, had profuse leucorrhœa, and menstruated every three weeks, but without pain. She had suffered from these symptoms some time; but, before they commenced, she had been out of health. The tongue, for some time past, had been dry and unpleasant on awaking in the morning, although tolerably clean during the day. She had been for some time weak and low, and had undergone much anxiety and trouble. On admission, she was anæmiated and dyspeptic, and the lower part of her spine was tender. The treatment which I recommended her was very simple. I prescribed the muriated tincture of iron with diluted muriatic acid, three times a day, and with each dose a drachm of the solution of the bichloride of mercury. At the same time the lower part of the spine was to be rubbed with tartar emetic ointment, night and morning, until pustules appeared. She continued this treatment for a month, and the entry then made is the following: "Has no uterine pain or uneasiness, no leucorrhœa, and no pain in the back; tongue clean, appetite good, bowels regular." The uterine pain ceased as soon as pustules appeared over the spine, which occurred four days after the commencement of the use of the tartar emetic ointment.

Remarks. The uterine pain appeared in this case to be almost entirely a consequence of spinal irritation, which again was probably due to mental uneasiness. The disorder of the digestive organs was very trivial, and was removed by drachm doses of the solution of the bichloride of mercury. The muriated tincture of iron, in combination with dilute muriatic acid, was given in preference to any other chalybeate, on account of the existence of profuse leucorrhœa.

Case v. Mrs. Ann Dove, aged 40, married, consulted me Jan. 1, 1851, suffering from intense and persistent pain in the uterus and right iliac region. The pain, although constant, was very much aggravated at times. She had been suffering from it for three weeks; and it supervened upon an interruption to menstruation, which was occasioned by her getting wet feet. Previously to this, however, she had not felt very well; and her digestive organs in particular had been very much deranged. The pain was attended by a frequent bearing-down sensation of the uterus, and she experienced great uterine suffering whenever the bowels acted. It was always worse when standing or walking, and better in the recumbent position. She had had profuse leucorrhœa for the last three weeks. The bowels were very flatulent and constipated, and the cæcum was especially distended. The tongue was very much furred, and the appetite bad; she was also feverish and thirsty, and had rheumatic pains in the limbs, which were generally worse at night. The coexistence of febrile disturbance with very marked derangement of the stomach and bowels, led me to direct her to take at once an emetic of ipecacuanha and squills; and, subsequently, three five-grain blue pills, with an interval of six hours between each. She was further ordered to take five grains of the sesquicarbonate of ammonia, and of the bicarbonate and nitrate of potass frequently in water.

On the next day, she was considerably better. The tongue was cleaner; and the pains were generally less in the stomach, uterus, and limbs. The emetic had produced full vomiting, and a large quantity of sour offensive matter had been thrown up. The bowels had acted twice. On the following day she was still better, and, in fact, convalescent; the uterine pain had ceased, the appetite was good, and the tongue clean.

Remarks. This case affords a good illustration of the sympathy which reciprocally subsists between the uterus, stomach, and the constitution at large. A casual interruption of menstruation was immediately followed by great constitutional disturbance of a febrile character, in which the stomach and digestive organs were especially involved; and there is every reason to believe, that the reaction of the latter upon the uterine organs was the cause of that intense uterine pain and uneasiness which were so prominent in the case. By adopting prompt measures for the relief of the chylopoietic disorder, a rapid cessation of the uterine pain was the consequence; and this independently of any other treatment. The case so far is extremely instructive; and, indeed, is rather introduced as illustrative of the general pathology of uterine diseases, than of the form more particularly under consideration.

Case vi. Charlotte Ward, aged 31, applied, November 5th, at the Paddington Free Dispensary, suffering from great pain and bearing down of the womb, with pain and dragging in the back; both were increased by walking or standing, and relieved on lying down. She suffered severely from leucorrhœa, and menstruated every three or four weeks, with much pain. There was a slight prolapsion of the uterus, and the organ was extremely sensitive to the touch, though not otherwise diseased. She had been suffering from uterine derangement for many years. She had had five very difficult labours, each of which had been preceded by marked disorder of the stomach and digestive organs. She had had, also, a great deal of mental anxiety. Eighteen months ago, she had been prematurely delivered of a still-born child; and the immediate cause of this was fretting and trouble. Her tongue was, and had been for some time, habitually unpleasant; the appetite was bad; and the bowels were scantily relieved. The lower part of the spine was very tender on pressure. She had been in very bad health ever since her marriage, in consequence of extreme anxiety. The first effect of this upon her constitution, was disorder of the stomach and digestive organs; and upon this uterine derangement soon supervened. She was now very weak and anæmiated, and had a distinct venous bruit in the neck. I prescribed for her ten grains of the ammonio-citrate of iron, and five of the sesquicarbonate of ammonia, in water, after each meal; also five grains of blue pill every night for three nights; and directed the lower portion of the spine to be rubbed night and morning with the tartar-emetic ointment until pustules appeared.

November 7. She felt better. The tongue was cleaner and more pleasant; the appetite better. The spine had been a good deal irritated by the ointment, and the uterine pain was much less. The leucorrhœa,

however, continued very great. She was directed to discontinue the use of the ointment; to take a blue pill every second night; and to substitute for the ammonio-citrate of iron, a mixture containing the muriated tincture of iron, with diluted muriatic acid and a solution of the bichloride of mercury.

November 18. She was much better and stronger. The tongue clean, and the bowels regular. The leucorrhœa was quite gone, and she had very little pain in the uterus. She was directed to continue the medicine.

December 3. She reported herself quite well; and was accordingly discharged, cured.

Remarks. The principles upon which this case was treated are sufficiently clear from the narrative. The patient, prior to the commencement of uterine derangement, had been very much out of health. She had been weak and low, had been suffering from disorder of the chylopoietic organs, and had been prematurely delivered of a still-born child, doubtless the effect of weakness and general ennervation. All this had been preceded by great mental uneasiness; and this would account for the irritable state of the spine, which was so apparent when the patient was first seen. It was probable, moreover, that the uterine disturbance depended upon this, together with the disorder of the digestive organs; and this view, which was suggested by the history of the case, was confirmed by the results of treatment. The remedial measures were exclusively addressed to these conditions; and, on correcting them, the uterine malady disappeared without any special treatment whatever. This case tends strongly to shew that uterine disease, however severe or long continued, is for the most part symptomatic; and that it can only be successfully dealt with, by carefully attending to those remote causes in which it has originated.

Case vii. Margaret Nadauld was seen by me, October 1, 1850, suffering from very intense pain in the uterus and left iliac region. The pain was of a very excruciating character, was increased by the least pressure over the uterus, and the slightest touch of the cervix was followed by great suffering. There was, moreover, a great deal of febrile disturbance, a quick pulse, hot skin, furred tongue, thirst, and disordered bowels, The lower part of the spine was very tender; and, on pinching up the skin of the left iliac region, the patient evinced a good deal of distress. The case so far was clearly neuralgic; and, on investigating its history, there was every reason to believe that it had originated in a fright which the patient had had a few days before. She was directed to have a linseed meal poultice applied over the hypogastrium and left iliac region, and a sinapism to the lower part of the spine. One grain of calomel, and five of Dover's powder, were to be taken every four hours, until three doses had been taken; and, on the following morning, as much castor oil as would insure a full action of the bowels.

The next day, the symptoms were all abated; and, so far as the immediate attack was concerned, the patient considered herself to be convalescent. I was, however, again consulted by this patient a few weeks afterwards, on account of general bad health, and chronic uterine disease. It appeared that she had been for many years in

indifferent health, that she had been weak and nervous, and had suffered more or less frequently during this time from pain and uneasiness in the uterus, especially when walking or standing. A digital examination did not reveal any sufficient cause for the pain; the position of the womb was natural, but the cervix was extremely tender to the touch. She had had a severe labour twenty years before, and thought that the womb was then injured, as she had never been quite free from uterine uneasiness since. She suffered very much at each menstrual period, and was sometimes confined to her bed in consequence. She had no leucorrhœa. The lower part of the spine was still painful on pressure, the tongue and digestive organs were disordered, she was thin and anæmiated, and there was a loud venous murmur in the neck. She had gone through much anxiety and trouble, and for some time past had been living very low. She was ordered to take ten grains of the citrate of iron, and five of the sesquicarbonate of ammonia, in water, after each meal; to take five grains of blue pill every second night, until the tongue and digestive organs were healthier; and to rub the lower part of the spine with the tartar emetic ointment, night and morning, until pustules appeared. This treatment was continued for about a month, and she then reported herself quite well. The entry I made is the following: "Is quite free from uterine uneasiness. The ointment produced a good deal of irritation; and ever since she has been entirely free from uterine pain or bearing down." This, she says, "has not been the case for twenty years."

Remarks. This report contains in reality the history of two distinct forms of uterine disorder; the one an attack of acute uterine irritation, attended by much constitutional disturbance and fever, and immediately occasioned by fright or severe mental agitation; the other that of a chronic form of uterine neuralgia, dependent upon derangement of the general health, anæmia, disorder of the stomach and bowels, and spinal irritation. When called upon to see the patient in the first instance, I had no previous acquaintance with her, and my attention was entirely directed to the relief of her acute sufferings. These subsided quickly, under the treatment adopted; and some weeks subsequently elapsed before I was again consulted by her. I then learnt that she had for many years suffered from chronic uterine disease, which, no doubt, had predisposed to the more acute attack for which I had previously attended her; and this is so far important, as showing that, when such predisposition exists, any occasional cause, such as sudden fright, shock, or emotion, may light up such a degree of irritative disorder and consecutive febrile disturbance, as it would be difficult otherwise to account for. The treatment in both instances was conducted upon principles which have been frequently adverted to, and therefore need not be enlarged upon.

Case viii. Jane Tresey, aged 26, single, applied to me for advice, suffering from pain in the uterus, back, and loins, bearing down, and at times intense suffering in the womb. She had, also, leucorrhœa; and, although menstruating regularly, had much pain at each monthly period. Her digestive organs were a good deal disordered, and she was weak and anæmiated. She had been suffering from these symptoms for a twelvemonth. She had previously been out of a situation,

and had in consequence become anxious and uneasy. This was soon followed by derangement of the digestive organs, and subsequently by uterine uneasiness and leucorrhœa. The spinal column was not examined. She was directed to take ten grains, increased to twenty, of the ammonio-citrate of iron, after each principal meal; and five grains of blue pill at bed-time, when the tongue was unpleasant on awaking in the morning. This treatment was continued for three weeks; and, in addition, she was directed to sponge the lower part of the back with cold salt and water night and morning. At the end of this time, she was better in every respect. She had no uterine pain nor leucorrhœa; the tongue was clean, the appetite good, and she felt altogether very well.

Remarks. This was a simple case of irritable uterus, arising from disorder of the general health, not very protracted, and therefore not difficult of cure. An impoverished state of the blood, with its usual consequence, dyspepsia, appeared to have been its sole cause; and the mere exhibition of steel in full doses was sufficient to accomplish the cure. The leucorrhœa ceased with the irritability of the uterus, shewing that, if it did not depend upon it, it had at least a similarity of origin. This, in fact, will be found to be frequently the case. Irritation of the nerves of an organ is generally followed by increased secretion, either from it, or some other with which it is sympathetically allied: this indeed is a mode of relief which is often spontaneously set up by nature, and, in proportion as it takes place, are suffering and disorder alleviated. To regard it, therefore, under such circumstances, as a disease which should be immediately checked, would be unsound in principle, and fraught with danger in practice; whilst, on the other hand, the removal of its remote causes is often followed by its spontaneous cessation, as shewn in the present case.

Case ix. Sophia Wheeler, aged 33, applied at the Paddington Free Dispensary, suffering from pain in the uterine region, more or less constant, but liable to severe exacerbations every two or three days. She had also great pain in the back and loins, and profuse leucorrhœa. She had laboured under these symptoms for many years. On a digital examination, the cervix was found to be extremely tender, but the uterus was not prolapsed, nor presented any unnatural condition, except a little puckering and irregularity about the os. Menstruation had been regular until her late pregnancy, but had always been attended with much pain. She had been confined five months ago, and had menstruated twice since. She had six children, and had suffered much from hæmorrhage at each birth. She was never very strong, or equal to much fatigue, and for years had suffered greatly from anxiety. The tongue had been also for many years very much furred and unpleasant in the morning; her digestion bad, and her bowels confined. She was extremely weak and anæmiated; and there was a loud venous bruit in the neck. The tongue and digestive organs were very much out of order. The spinal column was morbidly tender in various parts, and she was nervous and hysterical. She was ordered the muriated tincture of iron with muriatic acid, and the solution of bichloride of mercury in infusion of serpentary, three times a day; a blue pill at bed-time occasionally, and the

tartar emetic ointment for the spine. The treatment, however, was not long continued. The patient, at the time of attending, was in so much trouble and distress, that it was useless to expect much benefit from medicine—a circumstance which I pointed out to her. She therefore discontinued her attendance; but the case is instructive, as pointing out the existence of those forms of constitutional derangement, which have been remarked to be the cause of uterine disorder.

The last case I shall quote is that of a farmer's wife, who came from a considerable distance in the country to obtain advice in London. She had been for many years a severe sufferer from uterine disease, and had been treated by many practitioners without any benefit. Whether the treatment I recommended was serviceable or not, I have no means of judging, as I only saw her on the occasion of her consulting me.

Case x. Mrs. A. H., aged 37, was seen November 16, 1850. Her symptoms were severe pain in the uterine region, more or less constant, but very much worse at times, and much pain in the lower part of the back, extending round to the uterus, and darting down the thighs. She had had this pain about nine years. It was preceded by great mental anxiety, and by a miscarriage, which was brought on by jumping off a gate, and this was followed by considerable hæmorrhage. Ever since, she had been very much out of health; she had scarcely ever been free from uterine pain, which was always increased by walking or standing. The digestive organs had been throughout disordered; the tongue habitually unpleasant of a morning, and it was now much furred at the back. The spine was altogether very tender, but more particularly its lower portion, and the skin of the left flank was morbidly sensitive to the slightest touch. There was a loud venous murmur in the neck, and the patient was weak, nervous, and much depressed. She had been under the treatment of several medical men, who had each taken a different view of her case. By one she was said to have inflammation and ulceration of the cervix uteri, and she was cauterised for a long time, and leeches were applied to the uterus, but without any benefit. On a digital examination, the cervix was exquisitely tender, so that the slightest touch gave extreme pain, but it was not otherwise diseased. On the anterior part of the uterus, there was a distinct enlargement, probably fibrous. The axis or direction of the cervix was normal, and the only perceptible lesion was the extreme sensitiveness of the organ. The patient was regular, but menstruated with great pain. She had no leucorrhœa.

The uterine symptoms having been preceded by mental anxiety and much loss of blood, the spine being very tender, the digestive organs disordered, and the blood evidently impoverished, I was led to consider these circumstances, in the absence of any appreciable disease of the uterus, as furnishing the principal indications of treatment. I recommended the patient to have the spine rubbed night and morning with the tartar emetic ointment until pustulation was produced; to take five grains of blue pill every second or third night, as long as the tongue was furred; to regulate the bowels by mild aperients; and to take the citrate of iron after each meal, increasing the dose gradually from ten to twenty grains; to live well, and to adopt such a regimen

as was calculated to improve the general health. As I have before said, I have not seen the patient since, and therefore I do not know the result of the treatment. I had a note a few days after my interview with her, informing me that the ointment had produced a very angry eruption; a circumstance which would tend to show that the blood was not only impoverished, but bad; and so far to confirm the correctness of the view which had been taken as to the sympathetic origin of the uterine affection. At all events, the coexistence of spinal irritation, irritative disorder of the digestive organs, and anæmia, with uterine disease, was very evident in this case, whatever may have been their mutual relations.

General Remarks. Upon a general review of the preceding cases, the first inference I would venture to draw from them is, that they are affirmative of the truth of the propositions which were advanced at the commencement of this paper. In all, the uterine affection appeared to be consecutive to, or sympathetic of, constitutional derangement or irritative disorder of other organs. In none could it be regarded as dependent upon idiopathic disease of the uterus; and additional corroboration is derived from the fact, that it disappeared, in most instances, under the influence of treatment of a general rather than of a specific character.

Another inference which may be drawn from them is, that the influence of gastro-intestinal disorder and spinal irritation are very considerable in the causation of uterine derangements. In the majority of the cases reported, these coexisted, and would seem to have had a similarity of origin. In all, they were associated with anæmia, and had been preceded by much mental anxiety. How much, therefore, is due to each in the production of the uterine symptoms in these cases, it is impossible to say. Many circumstances, however, which have come to my knowledge, lead me to believe that derangements of the uterus, involving more particularly its nutritive and secretory functions, such as leucorrhœa and disorders of menstruation, have rather a gastro-intestinal origin when sympathetically induced; whilst those which affect more particularly its sensory functions, producing neuralgia, and various irritable conditions, are for the most part connected with an irritable or morbid condition of the spinal cord.

But it is not contended, that hysteralgia is in all cases necessarily connected with either spinal irritation, or gastro-intestinal disorder. I believe them to be very frequent causes, but I have met with instances in which it existed irrespectively of either. In gouty and rheumatic subjects, considerable uterine pain, more or less of a persistent character, is often met with, doubtless of a gouty or rheumatic nature; and I believe that severe irritation of any important organ or nerve may, under certain circumstances, be reflected upon the uterus, so as to give rise to very distressing symptoms. In illustration of this, I will quote the following case, which was published by Mr. Davis in the *Lancet* of August 1, 1846, page 125.

A patient, six days after labour, was attacked with severe pain, of an intermittent character, in the region of the uterus, and during the intermissions she had pain in the face. Leeches, fomentations, etc., were applied to the abdomen, and calomel and opium were given in-

ternally, but without avail. At length, the pain in the face becoming more severe, inquiries were made, which led to the discovery that one of the dentes sapientiæ was coming up, and causing inflammation and swelling of the gum. A free incision was accordingly made in the swollen gum, and an entire cessation of the uterine pain immediately followed, without any other medicine being given.

In this case, we have an instance of uterine pain arising from a peculiar but by no means unusual cause; and it may be a question whether some of the neuralgic affections of the uterus, which occur in young females, may not depend upon it. Every one is aware of the sympathy which subsists between the nerves of the uterus and those of the teeth; and that consequently, during pregnancy, tooth-ache is a frequent occurrence. I am not, however, aware that this is considered to be reciprocal, although the present case would prove it to be so certainly. As regards many other sympathies, I have reason to believe that such is the case, and that the uterus as fully sympathises with morbid conditions of particular organs and the constitution at large, as do these with abnormal or peculiar conditions of the uterus.

In further illustration of the pathology of these affections, I have made the following analysis of thirty-seven cases, in which the uterus was in a morbidly irritable state, not in consequence of displacement or appreciable disease. In all there was marked pain and uneasiness in the region of the uterus, which varied in intensity in different instances, and in some had been of long continuance.

I. Uterine Complications were observed in the following proportions.

In 3 there was no other uterine disease.
„ 15 the pain was complicated with leucorrhœa.
„ 7 „ „ „ „ leucorrhœa and dysmenorrhœa.
„ 3 „ „ „ „ leucorrhœa and amenorrhœa.
„ 1 „ „ „ „ leucorrhœa and menorrhagia.
„ 4 „ „ „ „ leucorrhœa and irregular menstruation.
„ 4 „ „ „ „ dysmenorrhœa alone.
„ 2 „ „ „ „ menorrhagia.
„ 1 „ „ „ „ fibrous enlargement of the neck of uterus.

II. Antecedents. The irritable state of the uterus had been preceded,

In 4 cases, by weakening discharges, such as profuse hæmorrhage, and protracted suckling.
„ 5 „ mental anxiety and distress.
„ 8 „ mental anxiety, with disorder of the digestive organs.
„ 2 „ sudden fright.
„ 18 „ disorder of the digestive organs.

III. Concomitant Affections.

In 18 there was well-marked anæmia, with disorder of the stomach and digestive organs.
„ 12 „ anæmia, with spinal irritation.
„ 3 „ spinal irritation.
„ 4 „ great irritability of stomach and digestive organs.

The facts, contained in the foregoing analysis, appear to me to justify the following conclusions:—

First. That, from the operation of the same causes, various and dis-

similar uterine diseases may be occasioned. Thus the principal antecedent circumstances in these cases were, for the most part, the same, and yet very different disorders were the consequence. In some, there was simply a painful condition of the uterus; in others this coexisted with leucorrhœa, amenorrhœa, dysmenorrhœa, menorrhagia, etc. The probable explanation of this is, that the operation of the different causes in question is primarily upon the nerves of the uterus, and that irregular actions, in regard to these, precede and give rise to those particular symptoms, which, in the aggregate, constitute disease as known by a given appellation.

Secondly. That, all these lesions may arise from constitutional disorder, may be perpetuated by it, and in many instances will cease on its removal. In these cases the chief circumstances which had preceded were either of an enervating or depressing nature; such as loss of blood, over-suckling, etc., or mental depression or uneasiness. The obvious effect of these would be to lower the tone of the nervous system generally, and to render it morbidly susceptible to impression. Thus it would happen in regard to the uterine ganglia and nerves, that they would be prone to irregular actions, and to participate readily in the morbid affections and conditions of other organs. If, again, the impressions leading to such abnormal actions are received from or through the medium of the ganglionic system of nerves, it is reasonable to suppose that the functions to which these are more immediately subservient, such as nutrition and secretion, would be more particularly disturbed, whilst those received from or through the medium of the cerebro-spinal system would rather give rise to painful and uneasy feelings; and thus may arise the difference in the uterine derangement which is consecutive to chylopoietic disorder and spinal irritation.

I am well aware that many of the cases of irritable uterus, which have come under my notice, and have been alluded to in this paper, were comparatively slight, as well as of recent occurrence, and therefore proportionately more amenable to treatment. I have, however, in no instance included under this title cases which were not attended by well marked pain and suffering in the uterus, bearing-down of the organ, and other uterine symptoms, irrespective of inflammation, displacement, or appreciable disease. In all, the general condition of the patients was that described by Dr. Gooch. They were nervous and hysterical, weak, and generally out of health; and the uterine pain appeared to be neuralgic. On the other hand, the cases which he has related were of a very confirmed and aggravated character; but, so far as I can judge from his account of them, they do not militate against the views which I have expressed, whilst the results of the treatment adopted tend rather to confirm them. In all the cases of irritable uterus which I have seen, the patients were, as I have stated, weak and enervated, depressed, and more or less anæmiated from the commencement; and treatment of the most invigorating character was, from the first, had recourse to, with the greatest benefit. Dr. Gooch's cases also appear to have been of the same description, but in which very opposite treatment had been adopted.

The first was that of a young lady who married at twenty-four, and, after her first confinement, went to a fashionable watering-place, and

there passed a winter of *laborious gaiety;* her mornings being spent in making calls, and her evenings in standing in crowded parties. *She lost her appetite, suffered much from languor, and became subject to shooting pains at the lowest part of her abdomen.* In consequence of an accession of pain, and a sense of fulness in the womb, she applied leeches, lived low, and was confined to her sofa several weeks. At the end of this time she was supposed to be well; but subsequently she had a violent relapse, attended with great pain and tenderness across the lowest part of the abdomen. From this time she appears to have been a great sufferer, and to have undergone very heroic treatment. She was bled four times in one week; blood-letting, either general or local, was afterwards repeated from time to time, and mercury was given to salivation. All this was done with very doubtful advantage, and her eventual recovery, after a protracted period of suffering, appeared to have been connected with the improvement of her general health, and a very cautious mode of living; but it is surely not too much to say that the treatment adopted, in the early stage, was calculated to impair very materially the tone of the nervous system, and to convert an ordinary neuralgic affection into one of very great severity.

The second case was that of a patient, who, when seen by Dr. Gooch, was so emaciated that he could encircle her arm by his thumb and middle finger. Her complexion was like wax; her digestive organs were very much disordered; so much so, that of every meal she brought up a portion; and her bowels never acted without medicine. Her pulse was small, weak, and quick, and easily quickened by the slightest motion. She had also profuse leucorrhœa. These circumstances surely indicated the existence of anæmia in a severe form; and yet blood-letting was one of the principal measures which had been had recourse to. Leeches had been applied, on an average, ten times a month; and if, as it is stated, the quantity of blood, drawn at each time, is estimated at two ounces, she must have lost about twenty ounces every month, and this while she was taking very little nutriment, and of that little rejecting a large portion. It is further stated, that the paleness of the blood, and the marble-colour of her face and skin, showed how the circulating fluid had been drained of its red particles. Such was her condition when she arrived in London, nearly twelve months from the commencement of her illness; and can it be a matter of surprise, after such treatment, that her nervous system generally was in a highly sensitive condition, and that the irritability of the uterus had become very great?

The third and last case mentioned is that of a young woman, who had borne four dead children, and therefore presumptively had not been very strong. Hæmorrhage had occurred after the last confinement, and was succeeded by pain in the hypogastrium and left iliac region. Her pulse is described as being small and wiry; a very common pulse, it is observed, after hæmorrhages from the uterus. The narrative informs us, that she was now bled four times in less than a week; that she lost in this time eighty ounces; that a number of leeches were applied to the hypogastrium repeatedly, and that, when seen a week afterwards, her face and lips were bloodless, her health broken, and that she had the local symptoms of irritable uterus, —it need not be added, in a very severe form.

Looking to the report of these cases generally, and their probable nature and origin, and observing the treatment respectively adopted in each, I confess I cannot feel surprised at their extreme severity. The existence of anæmia, weakness, and prostration, both antecedently to the attack, as well as concurrently with it, is conclusively shown, although the relation of these to the disease appears to have been altogether overlooked. Under such circumstances, what could have been expected from active depletion but the results which followed,—viz., increased anæmia, and a correspondingly greater irritability of the nervous system, more especially of those portions which were previously in a morbidly irritable condition?

Had the cases I have reported been treated in the same manner; had the patients to whom I have referred as suffering from irritable uterus, and who, together with this, were evidently weak, dyspeptic, and anæmiated, been bled frequently to the extent mentioned by Dr. Gooch; had they, in addition, been mercurialised, kept sedentary, and restricted in diet,—can it be doubted that their sufferings would have been proportionately increased? and that an irritable condition of an organ, otherwise slight, would have been rendered equally unmanageable and severe?

The practical conclusions, then, which I would venture to draw from the cases of this disease which I have myself seen, as well as from those reported by Dr. Gooch, are the following. In every instance of hysteralgia, or irritable uterus, it is absolutely necessary to look beyond the condition of the uterine organs for an explanation of the origin of the disease; to inquire particularly into the condition of the blood, and to ascertain how far it is either defective or excessive, or how far it is deteriorated by the prevalence of any particular diathesis, such as the gouty or rheumatic; to ascertain whether irritative disorder exists in organs which have sympathetic relations with the uterus, and to carefully investigate the condition of the brain, spinal cord, the nerves, and the nervous system generally. Such an investigation will often lead to the discovery of the causes of uterine irritability, where otherwise they would be overlooked; and will best furnish the principles upon which the treatment of the disease should be conducted.

Chester Place, Hyde Park Gardens, March 1850.

HINTS ON SOME RELATIONS OF MORALS AND MEDICINE,

WITH SPECIAL REFERENCE TO PULMONARY CONSUMPTION.

By THEOPHILUS THOMPSON, M.D., F.R.S., Physician to the Hospital for Consumption and Diseases of the Chest.

(*Read before the Medical Society of London, February* 15, 1851.)

The object of this communication will be best secured by presenting, in the first place, a few simple and brief considerations regarding some of the principal Causes of Pulmonary Consumption.

The first of these causes is *hereditary influence*. There is, perhaps, no disease in which this influence is better established; and it peculiarly claims attention, in consequence of its power to perpetuate the effect of causes which might otherwise prove temporary, and restricted to the individual exposed to their agency. In more than a thousand patients examined at the Brompton Hospital, in reference to this subject, about a fourth had lost a parent from consumption. This mode of origin was traced about twice as frequently in the women as in the men; and it is worthy of observation, that the influence tends peculiarly to extend in the direction of the sex in which it first appeared. Of thirteen women at present under my care, whom I have questioned carefully on this point of inquiry, three have lost both father and mother, two their mother only, one the father alone. And this statement represents, on a small scale, the conclusions deduced from more extended statistical inquiry.

Secondly, no one will doubt that the influence of *bad air* must tend materially to the production of phthisis; and, assuming this to be the case, I may specify tailors, journeymen bakers, and printers, as likely to suffer in a high degree. Tailors constitute a large proportion of the patients at the Brompton Hospital—not less than 7·2 per cent. They are, unhappily, liable to many other diseases, and constitute about 5·8 per cent. of the patients of a general hospital. A class, representing but a small proportion of the male population, must be exposed to very unfavourable circumstances, to be rendered in so high a degree prone to disease. Journeymen bakers are subject to complicated causes of disease;—work prolonged for twenty hours; gas-light instead of sunshine; hot gusts of flour-dust instead of the fresh air:—and of the journeymen bakers in this metropolis, probably a fourth have symptoms of phthisis.

The next class to which I would allude is printers. Although it is probable that the number of printers in this city is not above one third as great as that of tailors, their per-centage is half as many in our list of applicants at the Hospital for Consumption; and their liability to consumption appears to be four times as great as to other diseases. But there is an important fact connected with the liability of printers, for the knowledge of which we are mainly indebted to the meritorious

investigations of Dr. Guy, a physician entitled to the best thanks of the public for his laborious inquiries. The fact is, that the liability of pressmen and compositors materially differs. During a long period of observation, it was ascertained that, whilst the proportion of pressmen applying at King's College Hospital, who were consumptive, was one-fifth, that of the compositors amounted to one-fourth. The wages of the compositor being higher, and his habits fully as temperate as those of the pressman, we have to seek the cause of his greater proneness; and the obvious explanation would seem to be the want of the exercise which, in the pressmen, may be supposed in some degree to counteract the effect of confined air. This opinion derives confirmation from the observations made some years since by Lombard and Benoiston, on the effect of exertion of the arms in counteracting a tendency to phthisis.

The third cause, at which I shall only glance, is *dissipation*. The depressing influence of this cause will be readily acknowledged. To syphilis and mercury I have repeatedly traced the first origin of consumptive disease. In the majority of the male patients at present under my care, this influence seems to have had a considerable share in the production of phthisis. This leads me to notice a remarkable fact, as regards the liability of soldiers to consumption. Even the Dragoon Guards, who are more favourably circumstanced than many divisions of our army, exhibit annually a mortality of ·63 per cent., whilst that of the male population of England and Wales is only ·37 per cent. At first sight, it is probable that the cause above referred to would be suggested in explanation; and I am ready to acknowledge that our gallant soldiers, although above fear, are not so constantly as we would desire above reproach. But this explanation proves inadequate, when we reflect on the comparative immunity of sailors from the disease; and I cannot but attach importance to the explanation suggested by Dr. Duncan, viz.: "The listlessness of their life, and the dull monotony of drills and parades." (*Dublin Medical Journal*, vol. ix, p. 32.)

I am thus conducted to a branch of the inquiry, to which I am specially anxious to invite attention; namely, *the effect of mental impressions in predisposing to phthisis*. We are apt to forget the remarkable influence of emotion in modifying respiration; but, if any one will observe his breathing when any depressing subject is dwelling on his mind, he will soon be convinced of the tendency of such depression to retard the respiratory act. The terms breathless anxiety, breathless suspense, are not mere metaphors. The idea implied in these popular expressions is forcibly introduced by the patriarch Job, chap. ix, verse 18: "He will not suffer me to take my breath, but filleth me with bitterness":—and it may not be inappropriate to suggest how aptly this passage illustrates the fact that, while the language of inspiration is preeminently adapted for conveying truth, not to philosophers alone, but universally, even to the untutored multitude, it nevertheless, on occasions consistent with this principle, combines in a remarkable degree scientific accuracy with general comprehensibleness.

Inasmuch as mental depression may interfere with digestion, it may

lead to various maladies; but by retarding respiration, and thus inducing pulmonary congestion, I believe it specially tends to promote the deposition of tubercle.

It is not improbable that such an explanation may be applicable to a common condition of the recluse student, and the man of refinement, who shrinks from the busy scenes of active life, and, worn with cerebral labour, is "sicklied o'er with the pale cast of thought".

The medical statistics of our prisons afford striking illustrations of moral causes of disease. Dr. Baly has shown, from extensive observations of prisons in various parts of the country, and in America, under great varieties of climate, diet, and general regulation, the prevalence of one common circumstance,—namely, greater liability to consumption than exists among the population generally; amounting, in the case of the Millbank Prison (where, however, it must be acknowledged that a combination of unfavourable circumstances are in operation), to about four times the average; the time required for the full development of the effects of the unfavourable influence being about three years.

An interesting question arises, whether the causes referred to in this communication are equally influential with both sexes. The statistics which I have at command indicate a considerable difference. In London, the mortality of women from phthisis is much less than that of men, and the advantage is specially observed in married life; the proportion of the female cases to the male, under such circumstances, over the age of twenty-five, being as three to five. This remarkable fact can scarcely be due to other than moral causes; and such are easily assigned. Man, in struggling for the support of his family, is beset with anxious care; woman, with more faith and patience, provided she receives her just share of consideration and tenderness, fulfils cheerfully the duties of the day, and does not so anxiously regard the morrow.

The records of the Registrar-General supply, as it seems to me, an additional confirmation of this view, in the remarkable fact, that the mortality in some provincial cities, as well as in the metropolis, is least for women; but that in the counties the proportion is, in a higher degree, to the disadvantage of the female. The only important exception to the rule, as respects provincial cities, is Leeds, in which the excess of female mortality is equal to that in the kingdom generally. I know not how these facts are to be explained, except by some peculiarities of moral condition. As a test of this condition, it has occurred to me to examine the Registrar-General's return of the number of illegitimate children born respectively in certain districts which I had previously noted, as illustrating the fact just specified.

The order of increase, in the proportion of female mortality, is exhibited in the following table of the per-centage of deaths observed, in each instance, on 200,000 of the population, as deduced from the Registrar-General's return for the year 1837.

I have given, in an additional column, the per-centage of illegitimate children in relation to the whole number of children born; and although the returns, in this respect, are unavoidably for a different year, the relative proportion of different places for several successive years sufficiently corresponds to obviate any incidental fallacy.

	Deaths from Phthisis.		Proportion of illegitimate children to children born.
	Men.	Women.	
London	·455	·377	3·2 per cent.
Liverpool and West Derby	·595	·571	3·6 —
Manchester and Salford	·549	·548	5·8 —
Leeds	·440	·477	6·0 —
England and Wales	·378	·408	7·0 —
Paris, according to Benoiston ..	·288	·480	28·0 —

It is not intended to imply merely that the mothers of illegitimate children are peculiarly prone to phthisis, but that, in districts where the proportion is high, such a system of morals may be assumed to prevail as must extensively expose the female population, in a marked degree, to causes of moral disquietude. The return from Paris, even admitting some deduction on the ground of large Foundling hospitals, is remarkably high; and the female mortality of that metropolis, from phthisis, is not less striking. It will scarcely be disputed that, in any district notorious for the number of children born out of wedlock, there will the women be least happy in condition, most exposed to hope deferred, unrequited affection, bitter ingratitude, and all the causes which tend to wither the heart of those whose life may be said to ebb and flow with their emotions. If the power of mental causes to induce such disease were disputed, many instances might be adduced in support of my opinion. Let one suffice. In some parts of Wales a superstition still prevails that, if the image of any individual be put into one of the charmed wells, as that image melts away, the person represented will pine and die. A beautiful young woman had refused to marry a dwarfish and almost idiotic neighbour. The mother of the young man used every solicitation on his behalf in vain, and then, in revenge, declared she would put the image of the obstinate girl into the well. The poor girl credited the superstitious tale, and soon fell ill. An eminent physician, to whom I am indebted for the narrative, watched her with interest, prescribed for her symptoms, and strove to dispossess her mind of the idea which so painfully beset her, but in vain. There was no hereditary tendency, nor any other explanation of the origin of the disease; but phthisis distinctly manifested itself, and in six months she died.

Impressed as I am with the conviction, that depressing moral influences often induce consumption, I am not less persuaded that cheerful impressions tend to retard the disease. I have long observed that the patients improve more rapidly, and that the mortality is less, in the large than in the small wards of the Brompton Hospital, although the space allowed is proportional to the number of patients admitted into them; a result very different from that which we observe in diseases associated with morbid poisons, and even in some epidemics, especially influenza, in which the existence of such virus is disputed. The influence of cheerful society I have particularly observed amongst the female patients. And here I would remark, that women, from some peculiarity of constitution, bear confinement to the house in phthisis, and other diseases, better than men; whilst with men, horse exercise, and other muscular exertions out of doors, are more obviously useful,

and the evil of confinement is often greater than the risk of moderate exposure, even at a somewhat advanced period in the progress of disease.

Of the causes thus cursorily illustrated, as tending to induce and aggravate phthisical disease, some are under our own control.

First. The air of our apartments and workshops is not by necessity a contaminated air; open fire-places, with Arnott's ventilators, or a zinc-pipe, or some other simple precaution, will, to a great degree, correct the evil, and some hundred lives would thereby be saved annually in this metropolis alone. If the proportion of deaths from phthisis, among the artizans in London, were reduced to that which prevails among the gentry, fifteen hundred lives, at least, would be annually saved in this metropolis. No physical advantages can compensate for the evils incident to contamination or exclusion of light, air, and water. Vanity and ignorance may affect to regard disease as an exotic, but it is a narrow view to expect to exclude, by quarantine, diseases which close workshops can engender. A suspected ship is not so bad as a convicted house, in which not only sudden epidemics, but ailments still more destructive, although chronic, so readily originate.

Secondly. In addition to the use of free muscular exercise in the open air, great advantage would be derived from attention to the power with which the will is endowed over the respiratory muscles. And I cannot but believe, that some of the evils of close application to study would be obviated by occasionally pausing to practise breathing. On this subject I should be tempted to enlarge, were it not that the principle rests on physiological truths, which were well elucidated in a paper read to the Society by Mr. W. F. Barlow in the spring of 1849.[1]

Thirdly. It is the duty of the medical practitioner to take every opportunity of impressing principles imperfectly appreciated, but of great importance in relation to the production of consumption, and to place his influence in opposition to that inordinate estimate of lucre, which leads so many to forget that health is property of the highest value. He should enforce the truth, that ambition, disproportioned to power, is a constant source of physical exhaustion and moral disquietude; that it is difficult to calculate the amount of advantage which individuals would derive, if they would study to attain a correct estimate of their powers, and not engage in labours to which they are not adapted; and that health, as well as happiness, would be essentially promoted, if education were habitually conducted so as to train the mind for tranquil superiority to passing cares, and to fit for the exhilarating occupations of a useful life. Physical suffering is, in a great degree, attributable to ignorance or neglect of laws which are displayed for our instruction, and established for our advantage. And, as a general rule, it may safely be asserted, that "to be morally right is to be physically happy".

3, Bedford Square, February 1851.

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[1] Barlow (Mr. W. F.) On Volition as an Excitor and Modifier of the Respiratory Movements. *Medical Gazette*, July 20, 1849, vol. xliv, p. 97.

ON THE STATE OF MEDICINE AMONG THE BURMESE.

By E. A. PARKES, M.D., Professor of Clinical Medicine, in University College; Physician to University College Hospital, etc.

(*Read before the University College Medical Society, in March* 1848.)

Every one engaged in the practice of medicine, all who have experienced the difficulties which encompass the treatment of the majority of diseases, must have felt a desire to know something of the state of medicine among other nations, and particularly among those who are removed from the influence of European literature and civilisation. We naturally wish to know what is thought of a disease by those who are not learned in our pathology, nor trained in our methods; we wish to note the success of the treatment which has not been dictated by the traditions of our schools, and which may possibly not be in accordance with our theoretical explanations.

And, apart from this natural curiosity, the imagination always conceives that, among the people inhabiting the central regions of the earth, among whom civilisation first arose, there may yet linger some traces of that antique and sublime philosophy, which gave its faith and its religion to Egypt, its poetry and its philosophy to Greece. In this hope, the medical science of the Hindus has of late years been fully studied; and if it has not been found to justify all the expectations which were entertained respecting it, still full justice has not, as I conceive, been done either to its philosophy or to its practical application. Not to its philosophy, because the mind of the European, energetic, practical, rapid in induction, and trained for some centuries in the employment of a rigid and logical method of thought, cannot appreciate the minute, subtle, half-mystical intellect of the Hindu; an intellect, perhaps never grand, colossal, and imposing, but peculiarly pliant, rapid, penetrating, and acute. Not to its practice, because the European has perhaps not sufficiently estimated the influence which climate and locality, peculiarities in living, and modes of existence have upon diseases. And the standard by which the opinions of the Hindu physicians, and, to go down to a later date, of the Arabians, and particularly of Avicenna, have been judged, has been exclusively European:—as if locality and modes of life, which from one primitive type can effect so wonderful an alteration in the man's external traits, which can originate the projecting lower jaw, wide nostrils, dark skin, and woolly hair of the Negro; the long dark hair, the square head, and narrow oblique eye of the Tartar; or the regular oval face, straight nose, and light skin of the Asian variety, would not also exert an immense influence in altering, to a certain extent, the type of a disease, and in appreciably influencing the reaction of the body on a morbid poison.

I do not wish at the present time, however, to enter into this subject. The remarks I am about to make, refer, not to the Hindus, but to a single nation of that great Mongolian race, whose several vast empires lie on the outskirts of British Hindustan, and with whom England is gradually, but surely, coming in contact.

If among these nations we have not the same objects of interest which attach to the Hindu race; if the Mongolians have not been, as far as we know, the first cultivators of science and the teachers of antiquity, still this variety of man has its own importance, and its peculiar interest. It is of high antiquity; it has displayed in its wandering and nomadic life very remarkable forms of civilisation; it is gifted with a bold and determined intellect, which has led its hordes more than once from the deserts of Asia, and the wild steppes of Tartary, into the very heart of Europe. And, at the present time, the mass of the Mongolian or Turanian nations are almost alone in the fact, that as yet they have been comparatively unimpressed by the action of European intellect. Everywhere else in Asia, the traces of Eastern thought and manners, the peculiarities of Eastern civilisation, are slowly but surely disappearing before the overwhelming power of the people from northern Europe. Persia is yielding to the gigantic force of Russia; Egypt and India are virtually the appendages of the British crown; and if, in the recent movement upon Burmah, upon China, and upon Borneo, we see the first attacks of the restless and roving Saxon upon these remote nations, still the impression has hitherto been slight and evanescent; the mind of the people has been as yet unaffected, and the peculiarities of thought are still as distinct as the languages which convey them.

In addition to this, the subject is worthy of being now brought forward, with reference to the Burmese, it has, as far as I know, been absolutely untouched. Opportunity has not yet been afforded to the officers of the East India Company to examine perfectly the medical books of the Burmese, as they have done the Shastras of the Hindus; and I believe the few remarks I have now to make will be all that has ever been made known on the subject. I must, however, apologise both for the imperfection of these remarks, and for the desultory manner in which they are arranged. I have been anxious not to weary the Society by dry details, however curious; and I must also confess that my own knowledge of the subject is so exceedingly slight, that, if it were not for its novelty, I should not have presumed to offer it.

Medicine is practised in Burmah by two classes—by priests and by laymen. The priests have naturally become physicians, because, as among all Bhoodhist nations, science is incorporated with religion, and is included in the sacred books. To become a priest, it is necessary to be a philosopher; the complicated Bhoodhism which is professed is founded on a vast and singular system of physics, which would be very interesting, if I could bring it forward on the present occasion.

This system, which, according to Bhoodhist belief, did not arise from the discoveries of man, but which was revealed in all its completeness by the last incarnate Bhood, Gaudama, necessarily comprehends to some extent the science of medicine, modified, however, in some measure, by commentators and expositors, the writings of whom appear to be all of ancient date. The fact of the theory of medical study being thus connected with religion, would have had the effect of throwing the practice of medicine entirely into the hands of the priests, in the same way as in the middle ages it was confined to the monks of Europe, if it had not been for the peculiar constitution of the Bhood-

hist priesthood. To this constitution I must shortly advert. The Bhoodhist priests are singularly like their Roman Catholic brethren; they form an order apart from the laity; they follow no occupation, but are engaged continually in reading the sacred books and in praying; they live in monasteries or *kyomys;* they are vowed to celibacy, and in some places they will not look on the face of a woman; they live upon alms, and will neither till the ground nor cook their own food, for fear of causing death to some living creature; they cannot own any property; they consider all the usual occupations of men as unworthy their regard, and they endeavour to keep their thoughts continually fixed on abstract virtues and on heavenly rewards. There are many curious resemblances between them and the Romish priesthood. They wear a peculiar dress, keep the head shaved, tell their prayers upon beads, perform innumerable penances for faults, and every now and then retire into solitude, and live for months on the scanty fare which the piety of a few enthusiastic devotees may provide for them. They seem to have no ambition, and no desire of propagandism; in fact, their own supremacy and that of their religion is so completely acknowledged, that there is no room for the development of the ordinary passions of man. They do not mix in the affairs of their nation; they give advice only if asked for it; they occasionally cast nativities at the birth of children, or, in moments of national emergency, consult the stars, for they are great astrologers, and prophesy. It might then be conjectured that these extraordinary men, in the world but not of it, elevated, like their houses, which are built round the temples on the hills, above the turmoil of human events, would not be great practisers of an art, which, more than all others, brings man in contact with his fellow man. Moreover, their creed debars them, as was the case also with the Catholic priests, from the practice of many branches of medicine, such as midwifery, the treatment of syphilis, and surgical operations. They practise medicine therefore merely incidentally, and from charitable motives, without view to profit or honour; at the same time, they have a high reputation, and are often consulted in desperate cases.

A class of laymen practising medicine has therefore gradually arisen, and is of considerable importance among the Burmese. Occasionally medicine is combined with some other pursuit; thus the Burmese doctor with whom I was most intimate, and from whom I learnt the greater part of what I know of the subject, was not only a doctor but a schoolmaster. Although the Burmese have not the divisions of caste of the Hindus, the pursuit of medicine seems to be handed down in families, as was the case among the Asclepiadæ in Greece. The doctors are not in any way licensed to practise, but the public seem generally to employ those who have been regularly trained; they are universally the collectors and venders of drugs. A doctor, or *sathamar,* is educated in the following way. At an early age, he is sent to a monastery, or kyomy, and is educated by the priests. This is the practice also among all the richer laymen. When he is supposed to be learned in all the wisdom of the Burmese, he returns home to his father, who is most probably a sathamar, and commences practice.

His course of study is similar to that common, I should suppose, to all primitive nations. While at the monastery, he has learnt a number

of empirical rules respecting diseases and their symptoms. Of anatomy he has no practical knowledge, although he has some traditionary notions, which are generally erroneous; thus he believes that there are three hundred bones, nine hundred muscles, nine hundred veins, etc. Physiology and chemistry are, of course, quite blanks to him. But he knows an immense quantity of drugs, and their usual action upon the body, and he has his formulæ for using them. He has also been carefully taught the differences of constitutions, and the influence of seasons upon them. It is in reality a completely empirical medicine, which looks not to causes, but to effects; not to the philosophical exposition of a disease, but to its prominent symptom and final result. It often appeared to me, that I saw, in the practice of these rude brethren of ours, a faint glimmering of that art which reached its perfection in Hippocrates; an art which arose from a rigid observation and comparison of symptoms, and of the relief afforded by remedies; an art which must always be true for the locality and habits of the place in which it originated, but which becomes false the moment it is transplanted.

But I must hurry on to consider the kind of rules and principles, with which the Burmese doctor will have commenced practice. The best way to describe these will be to give an abstract of a book on medicine, which was given me by my Burmese friend, as containing a short account of his principles. I must mention, however, that the books on medicine are very numerous, and this is merely one of the shortest treatises.

I cannot pretend to anything like a correct translation; all the medical books are written in the language in which the sacred books are written, viz., the Pali, a variety of Sanscrit; but, in the case of medical books, the Pali is written in the peculiar round Burmese character (which you will see in the book I have sent round, a common book, made of the leaves of the palmyra), and it is also interspersed with Burmese words. In making my translation, I was therefore compelled to get the Pali translated into colloquial Burmese; but although I employed two men, one of them a sathamar, to assist me in translating, we found it impossible in some parts to make sense of it.

The book opens with a preface, containing a long invocation to Gaudama, the last Bhood, praising his power and goodness, and desiring to imitate him. The life of Gaudama, his numerous transformations, and the virtue by means of which he became Bhood, or incarnation of Deity, from man, are detailed at length. Then follows an enumeration of the nine planets, and of the days of the week governed by them. Then the constellations, twenty-seven in number, are enumerated. The days of the week, the planets, and the constellations, are all affirmed to be connected by mysterious ties, and the names of the former are derived from the latter: thus, into *Tanengenwae*, or Sunday, the names of three constellations enter, viz., *Burnē*, *Pubar-burne-gonā*, and *Pu-par-than*, and the same with the other days. However, it is unnecessary to go into these details.

After this preface, there comes a long description of the different temperaments or dispositions of people. The Pali word which I have translated temperaments, was translated into colloquial Burmese by a word *(dar-dath)* which corresponds exactly with the English word "temper".

There are said to be five temperaments; they exist in different proportions in all bodies, but they vary in their proportions in different persons and seasons. They are not described as being attended with any peculiar physical appearance, but it is curious that one of them is said to be attended by excess of bile, and another by excess of phlegm, and another is said, when in excess, to lead to madness. In these, perhaps, we may see the rudiments of the biliary or choleric, phlegmatic, and nervous temperaments, which have descended to us from the ancients, who were, in all probability, long posterior, in point of date, to the authors of the writings I am discussing.

Excess or deficiency in the temperaments produce disease; and these variations arise either from external conditions, as changes of season, etc., or from the agency of demons and evil spirtis. Thus the disturbance of the first temperament (*Ta-so-dah*) produces fever; hence a man has chills and horripilations; he is languid and afraid; has a distaste for food, etc.

The disturbance of the second temperament (*Wy-o-dah*) produces diseases of the chest or the head. If of the chest, there is sneezing, coughing, vomiting, dimness of sight, deafness, languor, restlessness, pains in the limbs, thick sputa. Occasionally there are swellings in the feet, and smarting of the eyes. If the head be more affected, there is pain, or, on the contrary, partial insensibility of the skin; half the body may become insensible; the face is drawn to one side; the tongue is stiff and numb; the fingers are stiff; the hands and feet are crooked; the loins bent.

If *Ar-bo-dah*, the third temperament, be diseased, the skin is affected; hence result venereal cutaneous diseases. The skin becomes copper-coloured, or like red flesh, or of a pale red colour, or like wax; there are spots on the skin and itching; the flesh cracks. Great derangement of this temperament produces small-pox, chicken-pox, and leprosy.

The fourth temperament, or *Put-ta-wye-dah*, produces bowel complaints, diarrhœa, and swelling of the abdomen.

The fifth temperament, (*Ar-can-dhar-dah*), when increased, produces peculiar dryness and scaliness of the skin. At other times, when decreased, it produces great sweating and emaciation; the perspiration is turbid.

The five temperaments are not all equally affected. Before the age of sixteen, phlegm is said to predominate; from sixteen to thirty-two bile predominates; afterwards again phlegm.

Then follows an account of the manner in which these temperaments, or elements of the body, as we might term them, are influenced by seasons. Thus *Ta-so-dah*, whose disturbance gives rise to fevers, is said to prevail in April, August, and December. *Ar-bo-dah* is said to prevail in October and July, etc.; but I need not occupy time with these details.

The next part enters into the description of remedies, arranged under the heads of the temperaments. The formulæ are almost innumerable, and consist chiefly of vegetables; arsenic, mercury, and antimony, are the only minerals named. When the temperament is disturbed, which gives rise to fever, emetics are ordered, and afterwards

spices, cloves, ginger, and numerous vegetables, chiefly aromatic stimulants, and a good many derived from large flowering vines.

But I can perhaps give a better account of their practice, by detailing the method of treatment of certain diseases.

I must first mention, that the diseases of these people are, in some respects, different from ours. Bowel complaints, marsh fevers, rheumatism, small-pox, syphilitic diseases, and leprosy are very common. Beriberi is seen sometimes; bronchitis and pneumonia are met with occasionally; phthisis also, but of its relative frequency I have no idea. Many of the diseases which result from our system of civilisation, from our large cities, the luxury of the upper orders, and the deprivations of the lower, are unknown there. Insanity and nervous complaints are not usual; dyspepsia and kidney diseases seem comparatively uncommon. But, of course, on all these points I speak almost at random; there being, in reality, no accurate data to go upon.

To combat these diseases they use an immense quantity of medicines, of many of which I know nothing. Among those best known to Europeans I may enumerate, opium, hemp, catechu, kino, gamboge, camphor, àreca, cardamoms, and all kinds of spices; anise, chalk, antimony, arsenic, mercury, castor oil, tobacco. Their formulæ are very complex; sometimes as many as sixty substances enter into one preparation. They give chiefly pills and decoctions. One remarkable medicine I must not forget to mention, viz., the "Tabasheer", or inspissated juice of the bamboo; it contains a large quantity of silica.

It is a curious circumstance, that among the sathamars a split or difference has of late years taken place; one class giving medicines in enormous quantity, the other limiting the quantity of medicine, and trusting chiefly to dietetics. In the following account I shall endeavour to describe the practice of the most rational among these two parties.

The most common class of diseases, after fevers, are probably bowel complaints. The food of the Burmese consists chiefly of fish, rice of different kinds, milk, and of various vegetables, particularly capsicum, and spices. They eat no meat, because they will not kill the domestic animals, although they will eat them when killed. In order to correct the acidity of their food, they are accustomed to take, once or twice in the course of the day, a small quantity of chalk and catechu. A few grains of chalk, carefully prepared and coloured with cochineal, are wrapped up in the leaf of a trailing plant belonging to the family of piperaceæ. A little bit of beetel nut is put into the mouth at the same time; and, after the whole mass has been sufficiently chewed, the teeth are rubbed with a tobacco leaf. Their diet almost requires the use of a dietetic antacid and astringent of this kind; it is a necessary luxury, which the poorest Burman indulges in.

When dysentery has once commenced, they endeavour to restrain it by the most powerful astringents, and their practice is very successful. Treat an Englishman in this way and he would be killed; the diarrhœa would not be restrained, or rather it would be aggravated by astringents; but, in the case of the Burman, one has to deal with a different system, and consequently with a modified disease. Dysentery is still inflammatory among them; but it is inflammation of a more passive

kind, running a course somewhat similar, giving rise to the same products, and yet not obedient to the same remedies.

Small-pox is treated admirably. The stages of the disease are well known, and the course of the disease determined. Low diet, the freest ventilation, and cold water, with perhaps a little antimony, form the only measures. The skin is sometimes bathed freely with cold water throughout the whole course of the disease, and this is said to be very useful.

Rheumatism assumes chiefly the form of chronic migratory pains. It is exceedingly common. Rheumatic fever is not, I think, known there. I never heard of it among the Burmese, and I never saw a case among the European soldiers, who would have been, I should think, subject to it. The chronic pains are chiefly treated by baths, shampooing,[1] and counter-irritation, particularly with the juice of certain euphorbia, which blister the skin in a very short time.

Syphilis is a most severe disease, and is, I think, aggravated by the method of treatment. Salivation is produced by fumigation with the fumes of heated mercury, and is kept up for some time. Secondary symptoms are notoriously frequent, particularly phagedenic ulcers of the skin. Accompanying these is a peculiar cachectic state of the constitution, which, when it has once originated, is seldom cured. The Burmans say, that a man so affected is ever afterwards unfit for labour. I may mention, that these unhealthy ulcers were found by a friend of mine, Dr. Tait, who was in charge of the corps of Rifles raised among the Burmese, to be cured very readily by large doses of cantharides.

Bleeding is seldom or never practised in any disease, and leeching is not much used. In fact, depleting measures are obviously unnecessary; the peculiar habit of body would not indicate them, and the severe inflammatory diseases—pneumonia and acute rheumatism—of our colder climate, are unknown there.

The Burmese are subject to some peculiar diseases, for which they have very efficacious remedies. At certain times of the year, chiefly in the rains, they are exceedingly infested with worms, particularly lumbrici. In children, and sometimes in adults, the general health seems completely to fail from the myriads of these animals. The worms are not developed by the peculiar diet of the Burmese, they originate in some peculiarity of climate; this is proved by the English soldiers being equally affected. When my regiment was first quartered in Burmah, we were astonished, at a particular time of the year, to meet with a number of children, who became enfeebled and cachectic, and, without visible disease, wasted and died. At the same time, we were surprised at being spoken to by many soldiers respecting lumbrici, which they said they had vomited. At first I thought little of this, as lumbrici are often vomited even in this country; but, after a time, the number of complainants became so great, that it was impossible not to see there was something more than usual in the case. On inquiry I found that such a disease was well known among the Burmans, who were accustomed to treat it by a certain remedy. This remedy, which they call "Wah-mo, or Wah-than-mo", is a fungus growing upon

[1] They shampoo exceedingly well—better than any other nation, except the Chinese—with elbows, fists, and feet.

the small prickly female bamboo. The Burmese collect it with great care during the rains, and preserve it in a dry place, well covered up. It is always in great request among them, and, in times of scarcity, has been sold for its weight in silver. I did not at first use the *Wah-mo;* but, after trying ordinary purgatives, turpentine, etc., without good results, I commenced with the Burmese specific, and was astonished at its effect. It was soon made out, that the cachectic state among the children was attributable to this immense collection of worms, and a few doses of the *Wah-mo* did wonders. I have known a child, of a few months old, discharge as many as sixty worms at one stool after two or three doses, and in the course of a few hours as many more; and from that time to regain appetite and flesh. It was equally efficacious in men, and the following year the soldiers bought it themselves in the bazaar, and took it in immense quantities. The *wah-mo* has a slightly acid reaction when fresh, and when it loses this, which it does very rapidly, it seems to become inert.

Diseases of the skin are common, particularly different forms of herpes, which seems to take the place which eczema occupies in this country. They use various irritating applications, particularly the acrid juices of some kinds of acacia and mimosa. Sandal-wood, rubbed down into a paste with water, is used for this purpose, and also by women as a cosmetic.

Leprosy is a very common disease, and is considered hereditary; so that the children of a leper, although not themselves leprous, are allowed to intermarry only with the children of other lepers. Lepers immediately become outcasts; and, in Burmah Proper, are obliged to live in leper villages, and to wear a peculiar dress. Although there is this rule, there does not seem to be any feeling of disgust entertained against this class, and wives will often follow their leprous husbands into retirement, and continue to cohabit with them. The government of these villages, in Burmah Proper, is a place of great emolument; as there is a great power of extorting money from persons who have any cutaneous disease, on the plea of their leprosy. Leprosy is considered incurable by medicine.

Hydrophobia appears to be known, although I never met with any one who could describe it. In the oath, administered in their solemn courts of justice, the Burman has to say, among other things, "If I speak not truth, let me be subject to all the calamities that are within the body, and all that are without the body; may I be seized with madness, blindness, deafness, leprosy, and hydrophobia; may I be struck with thunderbolts and lightning, and come to sudden death; may I vomit clotted black blood, and suddenly die in the midst of the people."

I am afraid of becoming tedious by going into further detail on these points. It will be perceived that the practice of medicine is empirically good, in so far as symptoms are combated by medicines whose use has been established by experience. The theory to explain the diseases, and the action of remedies, is utterly worthless, and has possibly been framed to accord with the practice, and not from any induction from phenomena.

I will now offer a few remarks upon the practice of surgery and midwifery among the Burmese.

Operative Surgery is almost unknown; and this is the more surprising, as malignant tumours are, I think, rather common, and must have been recognised as highly dangerous. But the Burmese have a great repugnance to use the knife. Abscesses they almost always allow to burst; and they foment them assiduously, in order to bring them quickly forward. I operated a few times among them, but performed only the minor operations, and these were almost always done in opposition to the advice of the sathamars.

Fractures they treat tolerably well with bandages, and means to keep the limb in position. I believe, also, they know how to reduce dislocations, but I never saw them do it.

Their Midwifery is, perhaps, the worst point about their practice; and there is great mortality, both among mothers and children. Labour is allowed to go on undisturbed till the child is born. The placenta is then forcibly detached, and an immense stone is placed immediately over the uterus, to hinder the copious flooding which often occurs. As soon as the bleeding has stopped in some measure, a large ring of fire is kindled round the bed, and kept up for nearly twenty-four hours. The child is not put to the breast, and the unfortunate mother, intensely hot, perspiring at every pore, and with a tremendous pulse, is hardly allowed to drink anything besides hot spicy infusions. I have been allowed to visit women after this tremendous ordeal, and have found them sometimes completely debilitated and exhausted; sometimes in a high state of fever. Many women, in fact, die, but from what form of puerperal or milk fever I could never learn.

It is not, perhaps, fair to charge upon medicine this extraordinary penance which the newly-delivered woman is obliged to pass through; it is, in fact, a religious ceremony, and the ring of fire is intended to scare away the evil spirits, of whom there are multitudes in Burmese mythology, and who would soon injure the woman, and through her the child, if they were able to pass the fiery belt drawn round her.

I have not alluded at all to the practice of charms, although this is very common; not, however, so much among the doctors as among the other laity. All epidemic diseases, such as cholera, small-pox, etc., are referred to the malice of demons, who are propitiated by gifts, invocations, and various curious charms. There is a very singular superstition connected with cholera. This disease is believed to be altogether a punishment for crimes. When the patient dies, his soul is released, and over that the evil spirit has no power; he can, however, seize the dead body, and wreak some mystical indignities upon it. To prevent this, directly the last respiration has been drawn, the friends of the deceased assemble round the corpse, and, with wild gestures, shout out certain sentences which are supposed to scare away the demon hovering over. These shouts are continued until the body has been carried to the place where such ceremonies are performed, and has been burnt. When all traces of humanity have been consumed by the flames, the disappointed demon is supposed to retire discomfited from the field.

I feel that I have already been too prolix on these details. I will occupy the Society only a minute longer, while I allude to the practice of Opium Smoking among the Burmese. Among all the Eastern

nations this practice prevails; and it is curious enough that the name is nearly similar in all nations, however different their origin and manners. Among the Burmese and Malays the name is "afyun", which is the same nearly as the Arabic word "afioon", and the Hindoo "aphion". I have been informed that the Malay term is the original one. Dr. Royle, however, a great authority, thinks they all come from the Greek οπος, juice.

Among the Burmese, opium smoking is a luxury; and the rich indulge in it a good deal. They smoke in the same way as the Chinese. The finest opium is made into a watery solution, then slowly evaporated, and the resulting extract rolled into little pills. Each pill is placed in a hole at the side of a pipe, is lighted by the flame of a little silver lamp fed with naphtha, and suffices for three or four inhalations. After several of the grains have been used, the Burman has had enough; it has merely made him lively and active. It has in no wise made him sleepy. This is a curious effect; and it is worthy of remark, if it be always the case, how differently this same drug affects different nations. From a moderate dose, the Chinaman becomes tipsy, or falls into a reverie; the Malay is rendered furious and excited; the Burman is merely slightly roused. It is a common thing, when a Burman has any difficult work to do, for him to take a pipe or two of opium; he then works for six or eight hours with unusual energy and skill, and afterwards falls into a sound and refreshing sleep. In large doses, the effect of opium is the same on people of all nations. They pass first into dreamy reveries, and then into deep sleep, or coma. The Burmese describe these reveries as foretastes of heaven, or what in their mythology corresponds to heaven, *naik-ban*. Opium is too dear to be very much used, and consequently I have never seen among the Burmese the debilitating effects which are said to occur among the Chinese. But, both among the Burmese and the natives of the Malabar Coast, the chewing and smoking hemp has appeared to me more hurtful than opium.

I think that it may be concluded, even from the few observations I have ventured to bring forward, that, although theoretically the science of medicine is at an exceedingly low ebb among the Burmese, yet its practice is not so destitute of a certain degree of reasonableness as we might have supposed. In fact, I have no doubt that much good is really done by the practitioners of medicine; and I am the more confirmed in this opinion, because their treatment is very much trusted to by their countrymen; and I believe when a whole nation has faith in a particular method of treatment, one may feel pretty certain that this method is, to a certain extent, capable of a successful application. Thus, however erroneous may be their pathology, I have some faith in the Pharmacopœia of the Burmese physicians; and I cannot deny them the credit we claim for ourselves, viz., that of being helpers of men, and useful in our day and generation.

13, Harley Street, Cavendish Square, April 1851.

ON THE SYMPTOMS, DIAGNOSIS, AND TREATMENT OF THE FUNCTIONAL DISEASES OF THE UTERUS.

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(Read before the Medical Society of London, March 29, 1851.)

When I decided to draw the attention of the members of this Society to the Functional Diseases of the Uterus, I soon became convinced that only a fraction of the questions which this subject naturally gives rise to could be considered, during the short space of time which is allotted to the reading of a paper; and hence arose a fresh difficulty, viz., the selection of the points most worthy of consideration. After some thought, I have come to the conclusion, that the most practical method of treating the subject will be to take a case which has occurred in practice, to detail the history, symptoms, and treatment, and then to consider what conclusions can be drawn from the facts thus brought forward.

Case. The case is that of a young lady, E. W., aged 26, spinster, who came under my care on October 29, 1850, when she gave the following history of herself.

The catamenia appeared at about sixteen years of age, and were accompanied with much pain at the lower part of the stomach and across the forehead; previous to this time she had "nothing the matter". The catamenia were now absent for twelve months, during which period the health was very delicate. She described herself as looking "very bad", being thin, very languid, and generally obliged to lie down every afternoon; as having a cough, no appetite, pain in the left hypochondrium, and much aching pain in the lumbar region and inside of the thighs. These last symptoms returned every fortnight or three weeks, and continued a day or two; she then "used to be pretty well", but the headache remained every day, more or less. For some months she was under the care of a surgeon, but experienced no relief from the medicines, which, she thinks, were various preparations of steel. Three months after the medicines were discontinued, the catamenia appeared for the second time, and were accompanied with great pain for two or three days. They were of a dark colour, continued nearly a week, and were not followed by any white discharge.

From this time the health was totally changed; she became stout, had much colour, and the spirits were very good. The catamenia appeared every month, within a day or two, accompanied with some headache and slight pain in the lumbar region and inside of the thighs. They were generally of a dark colour, and remained about five days; the quantity was not great, and they were usually followed by a white discharge for one week afterwards. The accompanying pains came on a few hours before the menstrual discharge, and remained for a day or two, gradually becoming less.

For four years she continued in this state of health, running about and dancing a great deal, whether the catamenia were present or not.

She was now attacked with what was termed "bilious fever", which was so severe, that her friends had no hopes of her recovery. It came on with flushes in the face, and great pain in the head; afterwards she was very thirsty, and drank much cold water; she was also very sick, vomiting large quantities of sour fluid, about half a pint three or four times a day, when, after a good deal of straining, a little yellow matter would come up. Great pain was also present in the back, the lower part of the stomach, and all over the thighs, but chiefly in the front and inside. These situations were also very sore if anything touched them, and had the feeling of being bruised or beaten. For three weeks she was unable to leave her bed; and during great part of this time she was delirious. When partly recovered, she left home for change of air, and gradually got about again—that is to say, she got much better. The appetite was very good (she always, indeed, felt hungry, with a sinking and craving at the epigastrium); she gained some flesh, but was never so stout as before; and she always felt wearied and languid, being soon worn out by any slight exertion, and was more subject to headache than before. The catamenia continued regular in recurrence; the accompanying pain about the same; the quantity diminished; the colour became lighter; and the white discharge increased in quantity and in duration.

During more than three years she remained in this, as she considered, delicate state of health, when, eighteen months ago, she was again confined to her bed for three weeks. This illness began, during the catamenial period, by the face being much swollen, and of a dark purplish red; and was attended with cold shiverings, and much fever. As in the former illness, she again had great pain in the lumbar region, at the lower part of the stomach, round the hips, and all down the inside of the thighs. The bowels were not moved for a fortnight, although she took a great quantity of castor oil. She felt very sick, but did not retch much. The medical attendant described the attack as "partly erysipelas", and ordered warm fomentations for the pain in the stomach, which gave some relief. She stated to me that the medicines "did not do any good", but that she gradually got about again, when she felt very weak, the spirits being extremely low. The stomach was so tender that she could not stand upright, but was obliged to walk double; her friends jocularly remarking that "she looked like an old woman after her confinement". It was now told her, that her illness was caused by not taking sufficient exercise; and she was ordered to get out of doors, and to keep the bowels open, for which she had some pills which griped very much. Her health was worse than it had previously been. At one time, however, it so much improved, that she thought it was going to be completely restored, when all the old symptoms returned, and she was just as she had been. After suffering in this way for nearly eighteen months she came to London, and presented the following symptoms.

She was rather tall and thin, with dark hair, dark eyes, swarthy complexion, and medium conformation. The expression was dull, heavy, and depressed; the lips of good colour; but the upper lip was much swollen, and of a dusky red. She felt very weak, faint, and inclined to be hysterical; had lost much flesh lately, particularly in the bosom, and about the upper part of the chest. On the day before I

saw her, she could only sit up for one hour and a half. The least exertion caused fatigue, when drops of cold perspiration would stand on the face, a singing noise be induced in the head, and attended by a great sensation of palpitation; she also had frequent feelings of faintness and sinking during the day. A dull pain was complained of across the forehead, attended with a feeling of tightness, and occasionally a hot heavy pain at the top of the head, at which time the face "feels so hot". The head very often, but not always, felt full, and frequently was much confused. The spirits were very low; she was easily excited, and started much at any noise. She felt rather nervous and irritable, which she tried to overcome; and sometimes she had the feeling as if something dreadful were going to happen to her, which was relieved "if she could cry". The memory was very bad, and much indecision had come on, which was not the natural character. Sometimes she slept pretty well, but had very bad dreams; sometimes she "could not sleep at all". When she did sleep, she frequently awoke with a start, frightened and perspiring. The eyes felt heavy and aching; the eyesight was dull and impaired. The skin was soft and cool, with some moisture. She always felt chilly, though the face and hands were subject to frequent hot flushes; nor could she bear either heat or cold. The pulse was 108, regular, rather small, and soft; no venous murmurs were heard. The tongue was rather large, pitted at the edges, which, as well as the under surface, were of a red colour; the centre being covered with a dirty white fur. She had a very unpleasant bitter and sour taste in the mouth, much thirst, and no appetite. She had not taken meat for the last month. Sometimes a sinking at the chest was felt, as if she wanted something, yet could not eat. There was no pain nor distension after taking food; but the stomach sometimes swelled very much, chiefly in the evening, before going to bed. The bowels were at the time confined; sometimes they were regular. The urine was pale, and in considerable quantity; at other times it was darker, less in quantity, thick, and deposited a red sediment on standing. Much complaint was made of a constant pain in the lumbar region, shooting up as high as the middle of the dorsal region. From the lumbar region it extended round the hips, and was most severe in the iliac regions, extending from thence to the hypogastrium, the groins, and the anterior part and inside of the thighs, which latter parts were very sore. The pain did not extend below the knees. From the upper lumbar region, pain also extended round the upper part of the abdomen, below the epigastrium. "A distinct pain" also existed in the sacral region, and extended round the glutæi muscles, and down the outside of the thighs, as far as the knees. The pain in the sacral region produced a feeling as if the back was broken, or as if she "wanted something to bind it up". For two days lately she had been lame in one leg, and could not walk across the room; she described this as not having power over the leg to stand, and feeling that the inability came from, or was connected with, the sacral pain. It came suddenly, and went away suddenly, in the night during sleep. She was always obliged to be very careful on sitting down, as this hurt her, giving the feeling of sitting upon some tender body. When the bowels were moved, great pain was felt, as if the motion passed over a tender substance deep in the pelvis, whilst a distinct pain was

felt at the anus. The pains extended up the back, and round the lower part of the stomach, and were not always equally severe. The catamenia were irregular in recurrence (six or seven weeks, and sometimes three months), and were accompanied by a great aggravation of all the pains described; they continued not more than two days, were very pale, and were followed by a great quantity of yellow discharge, which was constantly present.

On local examination, the vagina was found narrowed by the strong contraction of the muscles of the perinæum. It was hot, tender, swollen, and velvety to the feel; whilst the arteries, along its walls, were felt to pulsate strong and full. Passing the finger up to the uterus, this organ was found to be low, and somewhat behind the perineal muscles. It was very tender to pressure, hot, and swollen, having a somewhat soft and distended feel. The lips were smooth, with a well marked velvety surface, the orifice nearly natural, the neck enlarged, and surrounded by mucous membrane lying in circular folds; whilst the pulsation of the arteries was strong and quick. As no impediment was offered, by the existence of a marked hymen, to the introduction of a small speculum, this instrument was passed up to the uterus, when the lips were found somewhat enlarged, perfectly smooth, of a dusky brick red, and without a trace of abrasion or of ulceration. The mucous membrane of the vagina was of a similar, but deeper, dusky brick red colour. Some purulent matter entered the instrument.

Six leeches were applied to the anterior part of the uterus, and directions were left to encourage the bleeding to about half a pint. A saline diaphoretic mixture was directed to be taken three times a day, the warm hip-bath to be used for a quarter of an hour each night, and perfect rest to be maintained.

Nov. 1. The leech-bites had bled freely, and caused a faint weak feeling, but the pains were very much relieved, and more benefit had been experienced than from any means yet employed. Pulse 100, regular, and soft. The head felt rather light, but clearer. She was less nervous, and felt better. She was desired to continue the remedies.

Nov. 8. She continued improving; the vagina was much less tender, not so hot, and the arteries beat with less force and quickness. The surface was lubricated with a fluid, which was oily-like to the finger. The uterus was less tender and swollen, and the arteries beat with diminished force. In walking from the bed to the fire she staggered, yet expressed herself as being much better. The leeches were again applied; a pill, containing two grains each of blue pill and extract of henbane, was ordered to be taken each night, and a lotion of decoction of poppies and acetate of lead to be used twice a day.

Nov. 15. Reported herself as much better in every respect. The pains were all lessened; the discharge, though still yellow, was not so great. She slept better, though still annoyed by very unpleasant dreams; the appetite was much the same, the general strength much improved, so that she could now walk about with considerable ease.

Nov. 26. She had had an increase of the pain, in consequence of exerting herself more than usual, in order to assist in nursing her sister's children, who had been attacked with typhoid fever. The local tenderness and swelling of the vagina continued to diminish, as did also the force in the pulsation of the arteries. The uterus was still

rather tender, slightly enlarged, and rather firm to the feel; but the pulsation of the arteries was only perceptible on the left side, where they beat quickly, but were small in volume. Pressure upon this part increased the pain in the left iliac region, and in the stomach and lumbar region. The leeches were again applied, and rest enjoined; and she was directed to continue the other remedies.

Dec. 3. The catamenia appeared yesterday, the accompanying pain being nothing to what it had been. They were high coloured, and yet not inclined to black: the quantity not great In every other respect, she was very much improved. The leeches were repeated the day after the cessation of the catamenia, and the other remedies were continued.

Jan. 3. The catamenia appeared two days ago, with so little inconvenience, that it might be said she had no pain; she considerd herself quite well, and was most anxious to return to the country. She had gained flesh, slept soundly and well; the spirits and appetite were good; the bowels rather confined, the memory much improved, the head clear. At her earnest solicitation, she was allowed to return home, with strict injunctions to continue the warm hip baths, once or twice a week for a time; to rest a little each afternoon, and to take a saline bitter tonic twice a day.

Feb. 28. I received a communication from her, in which she said that she considered her health perfectly restored, and had gradually ceased to use the bath and the medicine.

Remarks. On glancing over the previous history of this case, it is evident that, at the age of sixteen, the patient having been previously in good health, an unusual degree of congestion of the uterus accompanied the commencement of the menstrual function. After the disappearance of the catamenia, the accompanying congestion remained, as was shown by the languor, want of appetite, pain at the hypochondrium, and the aching pain in the lumbar region, and inside of the thighs; and this affected the general health. A surgeon, misled, we may suppose, by that delusive system of considering a symptom of a disease as the disease itself, considered the disorder to be amenorrhœa attended with debility, and administered steel remedies, in order to procure the regular recurrence of the catamenia. This was not successful; nor is it likely that it should be, for, although iron is eminently efficient in removing that state of the blood upon which anæmia and chlorosis depends, it is most injurious when administered during congestion or chronic inflammation of the uterus, acting as it does, as a direct stimulant of the uterine organs, and hence perpetuating these morbid states. Did it in this case produce such an effect? Although I am not in a position to give a decided answer to this question, yet the probability is that it did; and that, when the actions of nature were no longer interfered with, they, to a certain extent, recovered their healthy condition. Three months after the remedies were discontinued, the catamenia appeared for the second time; though the uterus was still labouring under an undue congestion; as evinced by the great pain which accompanied menstruation, and by the dark colour of the discharge; and there was now also congestion of the vagina, as shown by the white mucous discharge.

From this period the health greatly improved, and for four years continued good; yet the original congestion of the uterine organs re-

mained, as is proved by the pains which attended menstruation, the dark colour of the blood, and the subsequent white discharge. She was now attacked with what was called "bilious fever", but which was, really, inflammation of the uterus. The symptoms which prove this were: great pain in the lumbar region, at the lower part of the stomach, and the front and inside of the thighs, delirium, great pain in the head, and sickness, attended with much straining, and vomiting of large quantities of sour fluid. How far this attack was to be attributed to the imprudent course of running about and dancing, which she was permitted to follow, I will not stop to inquire, but will only say that probably this was the cause. From this attack she partially recovered, with the uterine congestion more marked than before, and the general health in a shattered condition.

For three subsequent years the health remained in this state, when she suffered from another attack of inflammation of the uterus, of less severity than the former. This is shown by the cold shivering and the fever; the pains in the lumbar region, lower part of the stomach, and inside of the thighs; and the constipation of the bowels. No relief appears to have been obtained from the remedies employed; but she again got about, bearing the evident marks of serious uterine disturbance—great general weakness, depression of spirits, and inability to stand upright in consequence of the tenderness of the stomach, and the general appearance, which caused the jocular remark of her friends, "that she looked like an old woman after her confinement".

Symptoms. The symptoms, of uterine disease, such as were presented by my patient when she came under observation, may for convenience be divided into groups—direct, constitutional, and local.

In the group of *direct symptoms*, or those which arose directly from the disease itself, we may place, the pains in various parts of the body, the condition of the menstrual function, and the vaginal discharge.

The pains which were present in this case, were pains in the lumbar region, shooting up to the lower dorsal, and extending round the hips, across the sides of the abdomen, towards and into the hypogastric region, the groins, the anterior and inside of the thighs; also extending from the upper lumbar region round the upper part of the abdomen. At the same time, to use the patient's own words, "a distinct pain", giving the feeling as if the back "wanted something to bind it up", existed in the sacral region, extending round the glutei muscles, and down the outside of the thighs as far as the knees. Can any answer be given to the question—Why are the pains found in these situations? Will the anatomy of the nervous system of the uterus afford any clue to the explanation?

It has been pointed out that the portion of the nervous system, called the sympathetic, consists in reality of an admixture of the true sympathetic—the gelatinous fibre,—and of branches of spinal nerves—the tubular fibre;—and that by this means the various viscera have distributed to them branches from the cerebro-spinal system. It has also been shewn that, in addition to the nerves coming from the lumbar plexus, and distributed to the muscles and skin of the lumbar region, the muscles and skin of the abdomen, and the muscles and skin of the anterior and inner part of the thighs, nerves, likewise de-

rived from this plexus, are distributed to the lower portion of the uterus, through the medium of the hypogastric plexus. The organ is thus placed in direct relation with the nerves coming from the lumbar plexus, by means of the branches of spinal nerves, which are derived from the same plexus, and distributed to this organ. Now, bearing these facts in mind, and remembering that alterations of sensation may be reflected through the spinal cord, in the same manner as motor actions, we have a beautiful and scientific explanation why, in this case, in which the uterus is affected, the pains are felt in the parts supplied by the nerves derived from the lumbar plexus,—to wit, in the lumbar region, the sides of the abdomen, and the thighs. This, however, explains but a portion of the pains which were present. Another distinct class were seated in the sacral region, and extending from thence to the posterior part of the thighs. How are these to be accounted for? If we again turn to the anatomy, we find that the nerves which supply the vagina are not derived from the lumbar plexus, but come from the sacral plexus, which likewise supplies the skin and muscles of the sacral region, of the hips, of the perinæum, and of the posterior part of the thighs. Again, bearing these facts in mind, and remembering that sensory impressions derived from the vagina are reflected along the nerves derived from the same plexus as furnishes the vaginal nerves, we have an equally satisfactory explanation why, in the inflammation of the vagina, here present, the pains should be seated in the situations in which they were found.

As the consideration of these hitherto inexplicable pains is of great importance, as a means by which uterine affections may be distinguished from other diseases, and also as a means of diagnosing, whether the uterine affection be seated in the vagina, or in the uterus, or in both organs combined, or in the ovary, I may be allowed to make a short digression from the strict consideration of the case before us. It has been stated, that when the vagina is affected, the pains are reflected along the course of the nerves derived from the sacral plexus, and that when the lower part of the uterus is the seat of the disease, the pains are felt in the parts supplied by nerves from the lumbar plexus; both which statements are illustrated by the present case. But suppose the body of the uterus be the seat of the disease, where then are we to look for the pains which will be induced? Let us again turn to the anatomy, and see what that teaches. It informs us that the spinal nerves, which are distributed to the upper part of the uterus, are supplied by the intercostal nerves, branches from which pass inwards over the thoracic sympathetic, and join together to form the splanchnic nerves; and that the fibres which compose the splanchnic nerves traverse the semilunar ganglia, and contribute to the formation of the superior aortic plexus, from which the upper part of the uterus is supplied by nerves. From these data, we would expect, when the body of the uterus is the seat of disease, that the reflected pains would be found along the course of the intercostal nerves. And such is the fact. Did time permit, I could submit different clinical observations in support of this *à priori* conclusion; wherein most severe and obstinate pains, traversing the course of the intercostal nerves, and chiefly seated over one or both hypochondria, were found to depend upon inflammation of the fundus uteri, and

were immediately relieved by the application of a few leeches to the upper part of the neck of the uterus, that being the nearest available point to the seat of the disease.

It must not be supposed, that in every case the pains will be reflected along all the nerves which are in relation with the organ which is affected. In severe cases, such is the fact; but in less marked cases, one or two only of the nerves may be affected, or the pain may be chiefly confined to the terminal branches of distribution, producing an ill defined pain over a particular region of the body. Yet at all times, the principles which have been stated will materially facilitate the just appreciation, if they do not afford the means of an absolute diagnosis, of a large proportion of pains which are well known to accompany uterine disease, but of which no explanation has yet been given.

To return now to the present subject. Although the menstrual function and the vaginal discharge are in many cases, as in this, important signs of the condition of the uterine organs, yet nothing, it appears to me, has tended more to retard the scientific advance of uterine pathology than retaining, even to the present day, the artificial division of uterine affections, founded on the alterations of these functions. This is the more to be regretted, as the menstrual function is in no wise an indication of the nature of the disease which exists. In this case it was established at sixteen, and subsequently suppressed for twelve months, then to be re-established with regularity. And although the health was said, at this time, to be very good, yet, had attention been paid to the accompanying pain, the dark colour of the flow, and the subsequent white vaginal discharge, it would have been evident that a degree of congestion remained, which required but some want of attention to fan it into an attack of inflammation—a state of things which actually occurred. After this attack, the menstrual function, though regular in recurrence, still indicated that the original congestion remained;—but it indicated more: for it gave evidence, by the lighter colour of the flow, that the general health was suffering. At a later period, the great aggravation of the accompanying pain, and the continuous yellow discharge, were indices of inflammatory action in the uterus and vagina; whilst the irregularity of the recurrence of the catamenia, the diminished period of their flow, and the very pale colour they assumed, too clearly indicated the great influence which the continued suffering had produced upon the general health. It is worthy of remark, that the mucous and purulent discharges which accompany these cases are formed by the vagina, and do not in any way indicate the condition of the uterus, which may be seriously affected without any vaginal implication, and hence without any accompanying discharge.

The *constitutional symptoms* indicate that the digestive system, the nervous system, and the general health are affected; but they likewise show a great immunity of the respiratory and circulating systems. The disorder of the digestive system is marked by the œdematous and furred tongue, the disagreeable taste in the mouth, the want of appetite, the sinking at the epigastrium, the distension of the stomach in the evening, and the alternating condition of the bowels and urine. But these conditions do not indicate so marked a derangement of this system, as appears necessary to produce the disorder of the nervous

system and general health which is likewise present, and hence cannot be considered as the cause of the illness, but must be looked upon as one of the consequences of some other cause, which produces in like manner the disturbance in the other systems. An attempt has been made to connect the alternating conditions of the urinary secretion with a mal-assimilation of the food, and hence to use this secretion as a sign of the treatment required. In this, however, I cannot agree. The regular action of the kidneys is apparently disturbed by the same cause which disturbs or disorders the other organs of digestion. This is shown by the state of the urine varying in the same ratio as the original disease varies. When the pains in other parts of the body become intensified, indicating an aggravation of the uterine disorder, whether this be caused by the congestion which accompanies the catamenia, or from an increase in the disease, the urine becomes deeper coloured, scanty, thick from the deposit of lithates, and requires to be voided more frequently than before. But when the opposite state prevails, and the uterine affection is improved, the urine then becomes abundant, clear, and pale. These alternations are frequently observed during the course of these affections, and take place when the same course of diet has been continued throughout the variations. There can be little doubt that an improper diet, taken while the digestion is already impaired, will increase this disorder; but still this is not the original cause of the disturbance in the urinary functions.

The disorders of the nervous system are by far the most apparent. The various reflex pains which have been already considered, and which continually harass the patient, belong to this class of symptoms. In addition, we have pain across the forehead, and at the top of the head, with fulness, and occasional confusion of ideas; also loss of memory, depression of spirits, increased excitability and irritability of the nervous system, restless nights, harassed by frightful dreams, and impaired eyesight. Another condition of the nervous system, which is only indicated in this case, is one of great interest, and one which I hope to take up at some future opportunity. I allude to the fact of the sudden loss of power over one leg, and the sudden regaining of this power whilst asleep. I have met with some well marked cases of this description, where the patient had been treated for diseased spine, in consequence of the peculiar pain present in the sacral region. In some, a complete paraplegia existed in regard to the motor power, whilst the sensation was not perceptibly altered from that of health; in others, an incomplete hemiplegia existed. In all, the paralysis passed away as the uterine disease, which apparently produced it, was gradually cured, and the health regained its tone.

The evidence of the impairment of the general health is found in the loss of flesh—particularly marked about the chest, and especially at the bosom—and the increased frequency of the pulse. In this case we may also add the general weakness and languor, together with inability for exertion, which, when attempted, was followed by cold perspiration, singing in the ears, and beating of the heart. It does not, however, appear that we can in all cases attribute these latter symptoms to derangement of the general health; for they occur too early in the course of the disease for this explanation to be admitted; and further, the marked manner in which they are often connected

with the appearance of the catamenia, shows that the condition of the uterus, acting on the nervous system, is sufficient to produce them.

In casting a retrospect over the constitutional symptoms present in this case, we find that the nervous system was especially affected, and that this was attended by disorder of the digestive system. How is this to be accounted for? Will the anatomy and physiology, of which so much use has been made, assist in this explanation? I think it will. In addition to the anatomy of the nervous system affording a beautiful explanation of the various pains which accompany uterine disease, it further teaches, that the viscera of the abdomen are supplied by spinal nerves from the same nerves or plexuses which furnish branches to the uterus, *i. e.*, the dorsal and the lumbar nerves. These nerves send branches inwards, which become mingled with the gelatinous fibres of the sympathetic, and are distributed in company with them to the various viscera. With these anatomical facts before us, and with the knowledge that pains are reflected along the nerves supplied from the lumbar and intercostal nerves to the back, to the walls of the chest and abdomen, and to the thighs, we have a fair reason to infer that similar pains will be reflected along the branches furnished from these same nerves and distributed to the viscera.

This inference acquires additional confirmation from the "working" frequently felt in the bowels, and the tenderness of them which is present, independent of the tenderness in the abdominal walls. If this reasoning be correct, we are enabled to give a satisfactory explanation why the abdominal viscera should be disordered, which clinical experience has taught us is the fact. But is this derangement in the condition of the nerves sufficient to account for the derangement in the functions observed? I submit that it is, and that it affords a sufficient reason why the respiratory and circulating systems should be so little implicated. The nerves, which supply these systems, arise from the spinal cord higher up than the origin of the uterine nerves, and hence are not implicated in the series of reflex actions to which these diseases give rise. It is right, however, to call to remembrance that, in the case under review, the pulse was accelerated, and the heart beat strongly on exertion. These symptoms, however, appear to depend on the state of the general health; for it is well known that, as a rule, the pulse is not increased in frequency, nor is there palpitation of the heart, except when some constitutional state is present at the same time.

The *local symptoms* have been already detailed, and do not require further examination. They afford indisputable evidence of the existence of inflammation of the vagina and of the uterus.

From a short review of the pathology to which the examination of this case has led, we have the following propositions:—

1. The symptoms by which uterine disease is recognised are chiefly referable to derangements in the nervous system; which consist of
   (*a*) Pains reflected from the uterus to various parts of the body.
   (*b*) Irritation of the spinal cord, and its prolongation into the brain, communicated to the various organs through the spinal nerves distributed to the uterus.
2. The reflex pains, which have so much puzzled the physiologist

and the pathologist, are beautifully explained by attention to the anatomy of this portion of the nervous system.

3. Next to the nervous system, the organs seated in the abdomen are those which are chiefly implicated in the derangement.

4. The derangement of these abdominal organs may be explained by the irritation of the uterine nerves being reflected through the spinal cord, along the spinal nerves distributed to these organs, which nerves arise from the same part of the spinal cord as the uterine nerves.

5. The respiratory and circulating systems do not suffer from uterine disease, until this disease has existed a sufficient length of time to derange the general nervous system, or the general health.

6. The immunity of these systems may be explained from the fact, that the nerves, which are distributed to them, arise from the spinal cord, or its prolongations, higher up than the uterine nerves, and are, hence, not implicated in the reflex phenomena which exist.

7. The general health finally becomes implicated by the want of appetite, the deranged digestion, the want of sleep, the little which is gained being disturbed by frightful dreams; and by the constant state of irritation and pain which the patient habitually suffers, and which is greatly increased for several days, at each catamenial period.

8. And, as a corollary to these propositions, I may add that, when we remember that the organ under consideration is destined to have a periodic afflux of blood to it, to take on greatly increased arterial action, and to undergo wonderful enlargement as a physiological condition, all apparently designed by nature to occur without implicating the general health of the female;—we have a reasonable explanation why the diseases of this organ should affect the general system so little as they do.

Diagnosis. It is necessary to consider the diagnosis apart from the local symptoms, as it is important to establish it, before submitting the patient to a local examination.

From *Anæmia*. The symptoms which favour the idea of this disease being present are, the general weakness, the languor, and inability to exertion; the latter being followed by perspirations, singing in the ears, and beating of the heart; also the lowness of spirits, the nervous excitability, and the irregularity and pale colour of the catamenia. But the symptoms which contraindicate it are sufficiently well marked; they are the complexion, the red colour of the lips and mucous membrane of the mouth, the character of the pulse, and the absence of venous murmurs, or arterial whiffs: whilst the nervous irritability which is present, the pain in the head, the sleepless nights and frightful dreams, the pains in the back, abdomen, and thighs, the great pain attending the catamenia, and the yellow vaginal discharge, all too clearly point to the uterus as the organ chiefly implicated. I am aware that, in this appreciation of the symptoms, I may differ from some of our most esteemed authors; yet I feel assured that, in the description usually given of anæmia, authors have included symptoms which properly belong to functional diseases of the uterus, in consequence of these two affections being, not unfrequently, met with combined in the same individual. The state of health which is produced by the functional diseases of the uterus, is, however, very distinct from that of anæmia, though frequently confounded with it.

From *Rheumatism*, the diagnosis presents some difficulties. The aspect of the patient, the state of the digestion, the condition of the urine, which is high coloured, and depositing lithates, and the seat of the pains, might mislead. For we must remember, that the pains which accompany uterine diseases are seated in the nerves which supply the muscles of the back, abdomen, and lower extremities, and consequently might readily be mistaken for pains seated in the muscles themselves, especially as they are aggravated by the action of these muscles. But the exact seat of the pains, the course which they pursue, their aggravation during a catamenial period, the varying condition of the uterus, the disturbed state of the nervous system, and the general condition of the patient, aided by the previous history, will suffice for a correct diagnosis. Some authors consider that some functional diseases of the uterus essentially depend upon a rheumatic condition of the system, present at the time; and certainly the relief which is sometimes obtained by rheumatic remedies favours this view; but how far this may be accidental, and not essential, I am not prepared to say.

From *Disorders of the Digestive System*, this case offers little doubt in the diagnosis. The digestion was certainly disordered, but the disorder bore no relation to the general derangement which was present. In some cases which are attended by obstinate constipation of the bowels, with frequent sickness, and great pain in the forehead, as a sequence of this constipation, the diagnosis becomes difficult, especially from the reflected pains from the digestive organs being seated in much the same situation as the reflected pains from the uterus. The reason for this is obvious, on reflecting that the spinal nerves distributed to these organs are derived from the same part of the spinal cord. However, a careful consideration of the history and symptoms will suffice to form a diagnosis.

From *Disease of the Kidneys* there could be little hesitation in forming the diagnosis. The only disease with which the uterine affection was likely to be confounded, was pyelitis; but as this disease is generally confined to one kidney at one time, and as the pain in this case existed equally in both lumbar regions, the chances were greatly against the existence of this affection. However, I have known a similar affection of the uterus mistaken for a pyelitic attack. The circumstances which led to this error were, pain over the region of the kidneys, chiefly confined to one side, and increased on pressure; pain shooting down the side of the abdomen, simulating the course of the ureter; pain in the inside of the thigh; the urine being acid, containing pus-globules, and occasionally being impregnated with blood-discs and albumen. But on a careful examination of the symptoms, these errors were readily detected. The pain was not exactly over the seat of the kidney; it was more superficial, being evidently reached before the pressure could have affected this organ; it was likewise not present on pressing the kidney from the abdomen. The pain in the course of the ureter was also seated in the walls of the abdomen; the mixture of pus-globules with the urine was detected to arise from the purulent vaginal discharge, whilst the occasional presence of blood and albumen was derived from the same source during the presence of the catamenia. By attention to these points, the diagnosis was soon established.

It is far from unfrequent for the pains present in uterine affections to lead to the belief of the existence of *Ovaritis*, in consequence of pain over the seat of the ovary, which is increased under pressure, and attended with the occasional drawing up of the muscles of the abdomen, so as to simulate a swelling. However, attention to the course of this pain will show that it comes from the lumbar region downwards and forwards to this part; that, upon moving the skin over the muscles beneath, the pain is recognised to be seated in these muscles, and hence is increased by pressure before this can have affected the organs deep in the pelvis. Nay, further, it often happens, that upon gentle pressure great pain is felt, but on increasing this pressure and carrying it deep into the pelvis, little or no pain is complained of. The pain is occasioned by the pressure on the abdominal walls, and its severity, like that of most nervous pains, passes off from a continuance of the pressure. It is, however, very distinctive of the ovary not being the seat of the disease.

What is the diagnosis between this disease and "*inflammation and ulceration of the neck of the uterus in the virgin female*"? On referring to the symptoms of ulceration, as detailed by Dr. Henry Bennet, we recognise, in the description which he gives, the same symptoms which existed in the present case. He states that these symptoms indicate ulceration; yet, in the case under consideration, no ulceration was present. Here then is a marked discrepancy. This case, in itself, is sufficient to shew that the symptoms, which are given as indicative of ulceration, do not indicate this morbid lesion, inasmuch as they here existed in a marked degree, and yet not a trace of ulceration was to be found. Too much, however, has been written on this subject to allow it to be discussed in this incidental manner. It would occupy more time than can at present be devoted to it; yet I may state, that there is not sufficient evidence before the profession to prove the existence of this morbid condition in the virgin female, and that the statements, which have been made respecting it, contain serious fallacies and errors.

Treatment. The eminent success which attended the treatment adopted in this case, is the best proof that it was the correct plan. It also satisfactorily proves, that chronic inflammation of the uterus and vagina will produce great languor and depression of the general system, loss of flesh, pain and fulness of the head, great disturbance of the nervous system, and disorder of the digestive organs; and that all these symptoms will pass away when the local cause which produces them is removed. For, under the influence of mild antiphlogistic remedies, directed to overcome the local disease, all these morbid signs passed away, and the patient gained flesh, lost the languor and depression, recovered her natural spirits, the power of sleeping soundly, and the appetite; in a word, was restored to better health than she had had for years. It would, however, be conveying a very erroneous impression, were it supposed that all cases yield thus readily to treatment. In many, the original disease has continued a sufficient length of time to impress a functional change on the nervous system; and this change will remain after the local disease, which produced it, has been removed. These are troublesome cases, and

require gentle narcotics with general tonics, and attention to the mental condition of the female. At other times, chronic inflammation is combined with an anæmic condition of the system, which constitutes a distressing combination. For, on the one hand, depressing remedies are required to subdue the local disease, and yet are contraindicated by the condition of the general system; whilst, on the other hand, the chalybeates, requisite to restore the condition of the blood, perpetuate and aggravate the local inflammation.

In the case under consideration, the application of leeches to the uterus itself was resorted to immediately. This was done in consequence of the long continuance of the disease, the severity of the pains, indicating a considerable degree of inflammation, and the general aspect of the patient, which conveyed the impression that local remedies were required in addition to the constitutional treatment. However, in the majority of cases with which I meet in practice, the local application of remedies is not required, as the disease yields, in a short time, to mild narcotics, combined with small doses of blue pill, or grey powder, at bed-time; giving, during the day, alkalies, with hydrocyanic acid, in a bitter infusion; these remedies being aided by rest, and the occasional warm hip-bath before going to bed. In a large number of cases it is even unnecessary to recommend the use of lotions, which are particularly objectionable to the virgin female. The application of a few leeches to the perinæum, after the appearance of the catamenia, followed by a warm hip bath, is a very efficient means of combating the local determination of blood in chronic inflammation of the uterus and vagina, combined with congestion of the veins of the pelvis; a condition of things not unfrequently met with.

The plan of treatment which consists in giving stimulating remedies to "bring on", as the phrase is, the catamenia, whilst narcotics are administered to relieve the pain which this treatment induces, is much to be reprobated, as being the means of perpetuating the disease. It is very true that, in many cases, similar remedies, aided or not by a change of air, will restore the debilitated constitution, and, by removing some of the effects of the disease, lead to the delusive hope that the disease itself is cured. But, unfortunately, after a little time the good effect of this treatment passes away, and the patient returns to the condition in which she was previous to this plan being adopted. It is, obviously, beginning at the wrong end. Another plan of treatment, which consists in considering the reddened mucous membrane of the lips of the uterus as an ulceration, and attempting to cure this by applying nitrate of silver, is so erroneous, and founded on so many false premises, that it is impossible to enter upon the discussion of it at this late period; I only notice it to record my dissent from the erroneous pathology which it includes, and from the improper practice which it inculcates.

9A, Langham Place, March 1851.

OBSERVATIONS ON SOME OF THE COMPLICATIONS OF HERNIA, AND ON OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.[1]

By R. R. ROBINSON, Esq., M.R.C.S. Eng., late President of the South London Medical Society, and formerly Surgeon to the London Dispensary.

PART FIRST.

OBSERVATIONS ON SOME OF THE COMPLICATIONS OF HERNIA.

I TRUST I need not offer an apology for bringing the following cases before my professional brethren.

Hernia, from the suddenness of its appearance; the dangerous symptoms which may quickly follow; the rapidity with which it may destroy life; the delicacy of the operation which it often requires; the obscurity in which it is sometimes involved; and the beautiful illustration which it affords of the power of our art in arresting the ravages of death—ever has been, and ever will be a subject of deep interest to the surgeon. It is not, however, my intention to enter at large upon the intricate subject of hernia, but merely to offer a few observations upon some of its complications which have fallen under my notice.

I. STRANGULATED HERNIA—APPARENT REDUCTION—SYMPTOMS UNABATED. Cases occasionally occur, in which, after an inguinal hernia has been apparently reduced, symptoms of strangulation continue to increase, and lead to a fatal termination. This may be owing to two causes; either to the return of the intestine to the upper part of the inguinal canal, and not into the abdomen,—constriction, therefore, continuing at the internal ring; or to the return of the sac, together with the hernia constricted by it,—hernia reduced *en masse*. Of both of these varieties I am enabled to offer illustrations, for which I am indebted to my friend Mr. Luke.

CASE I. STRANGULATED INGUINAL HERNIA REDUCED EN MASSE—DEATH. A surgeon was called to a case of strangulated hernia, with well marked symptoms. The taxis was applied, the tumour disappeared, and the symptoms subsided, but returned in a few hours, and the patient died. Mr. Luke, who conducted the dissection, found a portion of mortified gut in the upper part of the inguinal canal. The hernia had been returned through the lower ring, together with its sac, at the neck of which the stricture was situated.

CASE II. STRANGULATED INGUINAL HERNIA REDUCED EN MASSE—DEATH. A labourer was admitted into the London Hospital, who was the subject of strangulated hernia. The hernia was relieved by the dresser, and all the symptoms subsided. The man did well. A fortnight afterwards, however, the hernia again descended, and again became strangulated. Upon this occasion the man *forcibly* returned it himself; the symptoms, however, became aggravated, and he died. Dissection showed that the hernia, with its investing sac, had been forced through both rings, the stricture still remaining upon it, and

[1] The substance of two papers read before the Physical Society of Guy's Hospital on March 10, 1849, and January 11, 1851.

seated at the neck. The whole had passed between the peritoneum and abdominal muscles, in a direction towards the bladder.[1]

II. Intestine adherent to the Sac. Where constriction takes place to such an extent as to excite inflammation, albumino-fibrine becomes effused, and a false membrane is formed, by which the intestine is glued to the sac. In these cases, there is very little if any serum secreted, and there is great danger, in operating, of wounding the gut; hence it is highly important to ascertain when this has taken place. Much may be learnt by pinching up the sac prior to opening it. If the sac is not adherent, it will feel thin between the fingers, and the contents will be felt to glide away; if it be adherent, the medium between the fingers will be thicker than can be supposed to arise from sac only, and no gliding will be felt. Cases III and IV, which were operated upon by Mr. Luke, which came under my observation, and which he has kindly permitted me to publish, are cases in point.

Case III. Strangulated Inguinal Hernia on the Right Side—Intestine adherent to the Sac—Operation—Recovery. A pavior, aged 55, subject to pulmonary disease, was admitted into the London Hospital on January 8th, 1828, under Mr. Luke. He had been subject to hernia for three months, but had never worn a truss. It had descended during a severe fit of coughing three days previously, and he had been unable to return it. The hernia was situated in the right groin; it was small, tense, painful on pressure, and devoid of impulse on coughing. Vomiting and hiccup were urgent, but there had been no motion. The warm bath and taxis being unavailing, Mr. Luke performed the operation. After dividing the integuments and some fasciæ, a membrane was brought into view, the nature of which was rendered obscure by numerous vessels running upon it in a circular direction; by pinching up a fold of it, however, between the finger and thumb, a globular body, evidently the intestine, could be felt underneath it. It was, therefore, cautiously opened, and proved to be the sac in a thickened state, having the intestine closely adherent to its interior by bands of recent lymph, which were most numerous, and most thick about its neck. These were carefully separated with the finger. This stricture, which was very tight, and situated at the inner ring, was divided; a knuckle of small intestine (of dark colour, from congested vessels) was returned into the abdomen, and the wound was closed in the usual way. The symptoms gradually subsided, and the recovery was rapid.

Case IV. Strangulated Inguinal Hernia—Circular Direction of the Vessels of the Sac—Adherent Intestine—Operation—Recovery. D. Lazarus, aged 62, was admitted into the London Hospital, under Mr. Luke's care, on the 11th of February 1833. He had been seized, on the 8th, with violent cough, after which

[1] I hesitated much before alluding to this complication, after the able paper upon the subject by Mr. Luke, in the twenty-sixth volume of the *Medico-Chirurgical Transactions*. As, however, these remarks were penned more than fourteen years ago, long before that paper appeared—as I am indebted to Mr. Luke for acknowledging it—as it is a very important complication of hernia—and as, from cases subsequently published by Mr. Luke in the *Medical Gazette*, it would appear not to be so rare as some surgeons suppose, I have thought it best to let it remain as originally written.

he discovered a tumour in the right groin, which soon became painful. Towards evening his food returned; he was frequently sick, and had hiccup occasionally. These symptoms continued unabated at his admission, when a small globular tumour was visible in the right groin which was painful on pressure, but had no impulse on coughing; there were also pain and tension of the abdomen, and the bowels were obstinately constipated. After the usual attempts had been made to return the hernia, without success, the operation was performed by Mr. Luke. The integuments and fasciæ being divided, the sac was exposed. Its vessels were circular, and it had strikingly the appearance of intestine; and it was surrounded by cellular tissue and fat, which had very much the aspect of omentum. When the sac was pinched up, it appeared thick; the gut, upon the most careful examination, could not be felt to glide from underneath it, which led Mr. Luke to express an opinion, that the intestine was adherent. The part of the sac which appeared the *thinnest* was then carefully punctured towards the pubal side, when *one drop* of bloody serum escaped. Upon introducing a director, the intestine was found universally adherent to the sac (except where it had been opened), by red and easily separable adhesions. The very tight stricture having been divided at the internal ring, the gut, a fold of the ileum, in a state of engorgement, was returned into the abdomen. Two hours after the operation the bowels acted, the symptoms soon went off, and nothing untoward occurred.

Remarks. It is difficult to imagine a more embarrassing case than the last of these, or one in which the intestine was more likely to have been wounded, as the usual guides in doubtful cases were entirely absent. The bowel could not be detected when the sac was pinched up; and, had the latter been opened at the *lower* part, the spot usually selected, the gut could hardly have escaped; as the *only drop of fluid* was fortunately placed at the part where the opening was made. Although, upon pinching up the sac, the bowel could not be felt, the precaution was valuable; as I think it probable that it separated the adhesions at that part, and, if so, was instrumental in preserving the intestine from injury.

The *direction* of the vessels has been laid down as a guide to distinguish between the gut and the sac; the vessels of the former, it is said, run in a *circular*, the latter in a *straight* direction. In the cases alluded to above, the vessels of the sac were as circular as those of the intestine; and consequently no assistance was gained from that source.

III. Mortification of the Bowel simulated by the Effects of Tobacco. In some irreducible herniæ, especially in those irreducible from bulk, tobacco enemata have been occasionally used with success. They do not, however, always succeed; and, when they fail, are injurious, as they tend to perplex the case, and, by greatly diminishing the powers of life, give rise to the idea that mortification has commenced. This is no mere supposition, but is illustrated by the following case.

Case v. Large long-standing Hernia—Strangulation—Collapse from the Effects of Tobacco—Operation—Reco-

VERY. A man, aged 55, the subject of hernia thirty years, was admitted into the London Hospital under the late Mr. Headington, the rupture having slipt from under his truss an hour previously. The tumour was large, tense, and painful. He was bled, and was put into a warm bath; by which means syncope was twice produced, but the rupture could not be returned. The pulse was at that time full and hard, and the tongue coated. The tobacco enema was tried, and repeated, after which the pulse became feeble, and his strength prostrated. The taxis was again unsuccessful. While under the tobacco influence, Mr. Headington visited him, thirty-two hours from the descent of the hernia. His countenance was much altered; it was shrunken, pale, and haggard; the pulse was small, fluttering, and intermittent; the tongue brown and dry; there was great thirst, and indifference to surrounding objects; and, although the abdomen was still tense, the tumour was flaccid, and could not be returned. Mr. Headington thought that mortification of the gut had ensued, that the case was hopeless, and that the man was *in articulo mortis*. Mr. Luke, who had witnessed the case throughout, suggested that the prostration did not exist prior to the use of the tobacco, and was referable to it. Upon this suggestion, Mr. Headington performed the operation, and with success.

REMARKS. Upon looking to the result of this case, there can be no doubt, although the symptoms much resembled those of mortification of the bowel, that the depression, under which the patient laboured, was owing to the tobacco. Nor can there be any doubt about the propriety of the performance of the operation; yet, had the operator followed his own opinion, he would have left the patient to his fate; the effect of which must have been delay, with the probability of a fatal result.

I may here allude to a case that came under my care some years ago, but the particulars of which have not been preserved, in which mortification of the bowel (in a gentleman, the subject of hernia, just returned invalided from India) was, in some degree, simulated by the collapse of jungle fever. He died, but I had no means of obtaining a *post-mortem* examination.

IV. PASSAGE OF FOREIGN BODIES THROUGH AN IRREDUCIBLE HERNIA. Although persons, with irreducible hernia, may pass many years without inconvenience, they are, nevertheless, in constant danger, when substances difficult of digestion, and irritating in their nature, are taken into the alimentary canal. A plum-stone, for instance, or more especially the stone of a peach, if accidentally swallowed, might, in such a person, be attended with very serious inconvenience. It is astonishing, however, what miraculous escapes sometimes occur. In proof of this I now refer to the gill-bone of a fish (?) (Fig. 1); it was very hard and sharp, and not only escaped being acted upon by the gastric juice and dissolved, but actually passed through an irreducible inguinal hernia, not only without any injury, but without the patient's knowledge; the first intimation which he had of it being a pricking sensation at the verge of the anus, from whence he withdrew it.

Fig. 1.

Persons, however, are not always so fortunate; for Sir Astley Cooper mentions the case of a boy, aged 13, admitted into St. Thomas's Hospital for irreducible scrotal hernia. He had an accident and swallowed a pin. Five weeks afterwards, the hernia began to swell and be painful. A poultice was applied; an abscess formed and burst, and, at the orifice where pus was discharged, the point of a pin projected; it was easily removed, but a fistulous orifice remained.[1]

V. Descent of the Bowel after Operation. If the hernia has been of long standing, and the rings have, in consequence, become enlarged, the hernia is liable to come down after the operation, and again become strangulated. Thus, in the patient mentioned in Case v, on the tenth day from the operation, the hernia came down, and was attended with pain and vomiting; the man was leeched, and put into the warm bath, when the symptoms went off, and the bowel gradually returned; so that by the thirteenth or fourteenth day it was entirely within the abdomen. On the thirty-ninth day from the operation, when he was convalescent, and about to leave the hospital, the bowel came down more than ever; pain, vomiting, and hiccup immediately supervened. He was again put into the warm bath, and bled to twenty ounces, by which means syncope was induced, and in a few hours the intestine was returned; shortly after which the bowels were opened; the pain, sickness, and hiccup, subsided, and he had no relapse. It is a curious circumstance, that the hernia, twice descending, should each time have threatened strangulation. The first time, as he was purged, its descent was probably owing to the action of the abdominal muscles; but for the second descent, there did not appear any adequate cause, as it occurred while he was sitting quietly in a chair. In another case that came to my knowledge, the strangulation was more complete, the operation was a second time performed, but the case was, notwithstanding, fatal.

Cases of this kind show the necessity for great caution in regulating both the diet and action of the bowels after this operation, and the absolute necessity of perfect rest in the horizontal position. Opium also, as recently advised by Mr. Cock,[2] may, in these instances, be sometimes beneficial.

VI. Double Hernia—Strangulation. It is not, I believe, very common, except in the inguinal regions, for two ruptures to exist in the same individual. A person may, however, be the subject both of an inguinal and of an umbilical hernia. Symptoms of strangulation may occur, and a doubt may arise to which hernia the symptoms are referable. Of this I am enabled, through the kindness of my friend Mr. Luke, to offer an illustration. I will first, however, advert to a case, detailed by Sir Astley Cooper, of a woman, admitted into Guy's Hospital with *three* herniæ; one at the navel, one at the right, and the other at the left groin. The umbilical hernia, and that in the left groin, were irreducible; that at the right groin felt extremely sore on pressure. A doubt arose as to which was the rupture requiring the operation; but, as the symptoms were not very urgent, the opera-

[1] Cooper, Sir A. P., Bart., Treatise on Hernia, Part I, p. 17.
[2] Cock, Edward, Esq., Guy's Hospital Reports, vol. vi, part 1.

tion was delayed. In the mean time the woman died. The tumour in the right groin was found to be an enlarged and inflamed absorbent gland, lying over an empty hernial sac. In the left groin was a portion of inflamed intestine, and at the navel was an irreducible omental hernia, which had suppurated. The intestines were adherent to each other, pus was interposed in some places, and a considerable quantity had been effused into that part of the omentum which was contained in the abdomen. Sir Astley observes, "this woman chiefly complained of pain in the right groin; and, if the operation had been performed, this would have been the tumour laid open".[1]

Case VI. Inguinal and Umbilical Hernia—Strangulation—Operation—Recovery—Sudden Death five weeks afterwards. Mr. Luke was called to a female who was labouring under an inguinal and an umbilical hernia, with symptoms of strangulation. Both ruptures were very tense and painful, both were devoid of impulse on coughing, and both were irreducible. The former was small, and was apparently contained in the inguinal canal; of the two it was the most tense, and could be obscurely felt though a thick layer of fat; he was hence induced to operate upon this one. He found, upon opening the sac, a portion of small intestine tightly strangulated; he divided the stricture, and returned the bowel. Relief followed, the symptoms subsided, and the woman perfectly recovered. While, however, in apparent health, she died suddenly five weeks afterwards.

Remarks. From the success which attended the plan adopted in this case, have we not a guide in future, should strangulation show itself in a person the subject of double hernia? May we not conclude that the hernia, which had existed the longest, and is the most tense, should be the one first subjected to operation. It is possible, however, that the rupture which had existed the longest may *not* be the most tense. In that case, I would be guided by the *tenseness* rather than by the *duration;* for I am inclined to think that, had the duration of the hernia in the preceding case been reversed, the inguinal would have been the one first strangulated, as there is more of tendinous structure, and therefore there is likely to be more compression in this than in the umbilical region.

VII. Unusual Direction of a Hernia. Embarrassment sometimes arises from the peculiar and unusual course which a hernia follows. Thus it is well known, that femoral rupture, by tilting over Poupart's ligament, sometimes simulates inguinal hernia. Inguinal hernia also, when direct, is sometimes placed underneath, sometimes between the spermatic vessels. The peculiarity to which I am about to allude, is not, I believe, generally known; it is the passage of the hernia, after presenting at the internal ring, *upwards* and *outwards* towards the anterior superior spinous process of the ileum, instead of *descending* along the inguinal canal. For a knowledge of this fact, I am again indebted to Mr. Luke. This peculiarity occurred in the preceding case (VI). On exposing the hernial sac, by cutting the tendon of the external oblique, it was observed to proceed from below, upwards and outwards towards the spine of the ilium, contrary to the

[1] Cooper, Sir A. P. Treatise on Hernia, Part I, p. 27.

course of the inguinal canal. From this arose a difficulty in getting at the stricture, which was surmounted by an assistant depressing the gut towards the pubis, and thus exposing the seat of stricture. There was but little difficulty in returning the gut, when the stricture was divided. Mr. Luke also conducted the *post-mortem* examination of a case where the surgeon, after repeated efforts (having opened the sac), had failed to return the gut into the abdomen. The dissection explained the cause of the difficulty. The sac was found, after passing through the internal ring, to pass *upwards between the muscles*, as well as in its usual course through the inguinal canal to the pubis. The internal ring, therefore, might be said to be opposite to the centre of the sac. The embarrassment, then, arose from the gut, when pressed at the pubal extremity of the sac, being received into that which might be called the ilial extremity, instead of being returned through the ring into the abdomen; and, on remission of pressure, returning to its former position at the pubis. From the case not being understood at the time of operation, the hernia remained unreduced.[1]

VIII. Peritonitis coexistent with Hernia. When a hernia becomes strangulated, inflammation is quickly set up in the peritoneal coat of the bowel, and sometimes spreads with rapidity through the entire peritoneum. Peritonitis and hernia are, therefore, very frequently combined. The former, however, is usually subsequent to, and caused by the latter; but it occasionally happens, that peritonitis occurs in a subject of hernia, in which the hernia is in no way implicated as a cause. By the combination of the two, however, much obscurity may arise. Of this we have an illustration in the following case.

Case vii. Reducible Inguinal Hernia on the Left Side—Peritonitis—Ulceration of the Mucous and Muscular Coats of the Bowel—Death. A man, aged 60, after having been exposed to wet and fatigue, and after having been unwell for a fortnight, was seized with rigors at irregular intervals, constipation of the bowels, and pain in the abdomen; but, the day before he came under my care, he had had three motions, which were described as scanty, and pale coloured. He was bled, leeched, and treated with calomel and opium, and aperients. At my second visit, the pain had been somewhat relieved; and, upon close examination, I discovered a tumour in the left groin, which he had never mentioned, but which he now stated to have existed eight years. It was returned easily, and with a gurgling noise, into the abdomen, when gently pressed. The tumour soon reappeared, the symptoms increased in severity, and he died the following day.

On inspection, the tumour in the left groin was found to consist of an old hernial sac, containing a portion of omentum, not gorged, and some serum. There was general peritonitis: about a quart of serous purulent fluid was found in the abdomen, with flakes of lymph, by which several of the convolutions were glued together. The jejunum

[1] See, upon this point, observations by Mr. Cock in Guy's Hospital Reports, new series, vol. v.

and upper folds of the ileum were very much distended with flatus. Six or eight inches of the latter intestine towards the cæcum were more flaccid than the rest; at one spot, ulceration had taken place through all the coats, but the contents of the gut had been prevented from escaping by adhesion to the surrounding parts, which had, however, become so softened, that yellow fæces escaped upon the least pressure. Several small vascular ulcers were seen in the mucous membrane of the lower part of the ileum.

Remarks. From the facility with which the hernia was reduced, and the entire absence of anything like constriction, either upon the intestine or omentum after death, it is clear that there was no *strangulation*, and that the peritonitis did not arise from that source. I think it was entirely unconnected with the hernia; and, from the patient suffering from rigors, pain in the bowels, constipation, and sickness, as well as from the ulcerated state of the intestinal mucous membrane, I believe that it was of a chronic character, and had been going on for some time.

I should have remained in complete ignorance of the hernia, had I not accurately explored the abdomen. This points out the necessity of doing so in all cases of abdominal inflammation—a custom which I generally adopt. From a conviction, however, that this was a clear case of peritonitis, I did not suspect the hernia, nor detect it until my second visit. The delay was in this case of no consequence; had, however, the peritonitis masked a hernia, it might have been otherwise, and a few hours might have proved very important.[1]

IX. Reducible Hernia in one groin—an Irreducible Tumour in the other—Peritonitis. In the preceding case, the reducible condition of the hernia left no doubt as to the propriety of treatment. The one to which I will now advert was, however, involved in great obscurity, and caused at the time much interest.

Case viii. Reducible Hernia in Left Groin—Irreducible Tumour in Right Groin—Symptoms of Strangulation—no Operation—Death from General Peritonitis. A Welshman, aged 80, was brought into the London Hospital. He was unable to speak a word of English; but, by means of an interpreter, it was ascertained that he had been the subject of herniæ in both groins sixteen years, which were easily reducible. Three weeks before his admission, he perceived a swelling in his right groin, which he could not return. It appeared suddenly, while he was in a passion. Upon examination, a hernia, easily reducible, was detected in the left inguinal region; and in the right groin there was a tumour, the size of a small walnut, circumscribed, unyielding, very hard and painful, the pain being increased on pressure. He had had a slight motion on the morning of admission, but none before that for *three* days, and none before that time for *ten* days. There was no impression made on the tumour by coughing; the abdomen was very tense, and painful on pressure; there was vomiting, which had existed *eighteen* days, and hiccup at times; the countenance was expressive of anxiety, the tongue dry and red,

[1] Vide Case xi.

the pulse small and wiry. Leeches were applied; he was put into the warm bath, and took calomel and opium in small doses, with salts and peppermint. No impression was made upon the tumour, but the bowels were freely opened. A consultation was held: the case was regarded as one of omental hernia, but the bowels having been freely opened was considered as a sufficient reason for not performing any operation. The bowels continued to act; but the vomiting, hiccup, and other symptoms increased, and the patient died fourteen days after admission.

Dissection. The peritoneum covering the abdominal parietes was very much inflamed, as was also that covering the intestines. Four ounces of serous fluid, with flakes of lymph, were found in the cavity of the abdomen. The folds of intestine were glued together by bands of lymph, easily separable. The hernia on the left side had returned, and appeared to have consisted of a portion of the descending colon, part of which was adherent to the internal ring. The tumour on the right side appeared to consist of the remains of an old hernial sac. The fold of peritoneum constituting this sac was very much thickened, and contained a substance resembling cartilage.

Remarks. Was not the peritonitis in this case independent of the hernia? It is clear from the *post-mortem* examination, that an operation could have availed nothing; yet it is questionable, whether the bowels having been opened was a sufficient reason for not operating. It is true that the *bowel* could not have been *completely* obstructed; but the omentum might have been imbedded in the sac, and might have been the cause of the symptoms. An operation in that case might have been attended with benefit. With the exception of constipation, the symptoms of strangulation were strongly marked; there were vomiting, hiccup, tension both of the tumour and abdomen, pain increased on pressure, and a want of impulse on coughing. Under these circumstances, a surgeon would, I think, be justified in examining the nature and state of the tumour.

X. Strangulated Hernia subsequent to Peritonitis. The complication to which I shall next allude, is one of a very distressing and serious nature. It is the occurrence of strangulated hernia, in a person who at a *distant* period had been the subject of general peritonitis, which had terminated by adhesions of the intestinal convolutions. Of this the following is a melancholy example.

Case ix. Strangulated Scrotal Hernia—Former Peritonitis—Operation—Descent of several adherent Convolutions which it was impossible to reduce—Death in twenty-seven hours. In a strong muscular man, aged 44, who had been from birth the subject of hernia, which was easily reducible, but for which he had never worn a truss, the rupture one morning descended, and he could not reduce it; he therefore applied for advice at the London Hospital. There was a large tumour on the right side of the scrotum, very tender to the touch; there was some tension of the abdomen, and he had had no motion for twenty-four hours. He was bled and put into the warm bath, and the taxis and tobacco enemata were tried, but all without avail, and without making any impression on the tumour. The symp-

toms increasing in severity six hours after these means were resorted to, the operation was performed by the late Mr. Harkness. Upon opening the sac, the hernia was found to consist of a fold of small intestine, the surfaces of which were adherent by bands of lymph of long standing. No sooner was the stricture divided (which was principally at the outer, although there was slight constriction at the inner, ring), than fresh convolutions, also adherent, descended, owing to the distended and tympanitic state of the abdomen. Notwithstanding well-directed efforts of twenty minutes' duration, these convolutions could not be returned; and so greatly had the tumour augmented, that the integuments would not cover it; the bowel was therefore protected by lint dipped in oil. Great pain, both of the intestine and abdomen, followed, together with vomiting and hiccup; the gut which protruded became very vascular and thickened, and in some parts covered with false membrane, while, in others, it was even granular. Great depression of the system followed, and the patient died twenty-seven hours after the operation.

Dissection. The passage from the sac to the abdomen was free. The peritoneum generally was highly vascular; the convolutions of the intestines were much congested, very much inflated, and everywhere united together by bands of long standing; four of these united the folds inclosed in the sac.

Remarks. As the hernia was of large size, it would have been much better to have divided the stricture without opening the sac, as advised by several authors, and especially by Petit and Mr. Aston Key, and more recently by Mr. Luke. Had this plan been adopted, it is probable that life would have been preserved; at all events, much distress, both to patient and surgeon, would have been avoided. Had there been, instead of a *large* hernia, only a *slight* protrusion until the stricture had been divided, and the sac opened, and then a fresh descent of the bowel had ensued, which it was found, partly from adhesion of the convolutions, and partly from the tympanitic state of the abdomen, impossible to reduce—what should have been done? The only alternative seems to be puncturing the gut; by this means the flatus would be got rid of, and the bowel so far diminished in size as to allow of its being entirely covered with the integuments, if not passed into the abdomen.

XI. Enlargement of the Inguinal Glands coexistent with Strangulated Femoral Hernia. In femoral hernia, obscurity may arise from enlargement of the inguinal glands. The hernia may become strangulated, and may subsequently return into the abdomen; a tumour and some symptoms of strangulation may nevertheless remain,[1] as in the following case, which was rendered still more embarrassing by other disease.

Case x. Abortion—Uterine Hæmorrhage—Enlargement of the Inguinal Glands—Strangulated Femoral Hernia—Disease of the Stomach and Cholera? I was requested by my

[1] See an interesting case in point by Mr. Else, *Medical Observations and Inquiries*, vol. iv, p. 355.

colleague at the London Dispensary to visit, on July the 14th, 1833, Mrs. M. A., aged 31, who had been admitted as a patient under his care on the 7th, to whom I am indebted for the following particulars. About seven weeks previously, she had miscarried; flooding had supervened, and continued some weeks, but was stopped in two days by rest and sulphuric acid. On the 13th, finding herself quite well, she went out, after which she was seized with incessant vomiting; the matter vomited amounted to *five or six quarts*. It was chiefly a turbid fluid, possessing a strong smell, much like that perceived upon opening the abdomen of subjects recently dead, and annoyed her greatly in passing. She complained of pain across the abdomen, which seized her at very short intervals, and then went off; her pulse was 132 and feeble; her countenance anxious. She had had no motion since the attack. On inquiry, it appeared that she had a small tumour on the inside of the left thigh; it was entirely devoid of pain, and had not the least impulse on coughing; it was very irregular, and had much the feel of an enlarged gland. There was no tension of the abdomen, nor the least abdominal pain on pressure; no hiccup. Her voice had the peculiar sound of cholera, and the depression appeared to me to be of that character. Taking all circumstances into consideration, I was impressed with the idea, that either there was not hernia, or that, if there was, the contents of the sac had returned. I suggested the administration of salts and peppermint water, to which in the evening calomel and opium were added.

On the 15th, we found that the vomiting had continued, and that she had passed neither motion nor urine. Her features were contracted and of lead colour, the fingers bent, the nails blue, the extremities cold, and the pulse imperceptible. It was the decided impression of two physicians who saw her, and of myself, that the case was one of Asiatic cholera. The effervescing mixture, with ammonia, was given, and brandy and spiced beef-tea administered; but all to no purpose, as she died at five o'clock in the afternoon.

Dissection. Putrefaction was fast advancing. The abdomen was very much distended; no flatus, however, escaped upon opening it. The stomach and small intestines, to within the lower third of the ileum, were thickened and very considerably distended with a light drab coloured fluid, which, upon removal, half filled a bucket. The mucous membrane of the stomach was very vascular, and in some parts covered with an apparent false membrane, which separated by maceration. In two places there were large black spots, which at first looked like sloughs; but, upon closer inspection, the membrane did not appear destroyed. It was, however, far from healthy; it was rough, devoid of villi, and in places studded with spots, some of black and others of yellow colour. Upon examining the left groin, there was discovered a small hernial sac devoid of contents, covered by one of the inguinal glands, much larger than common (Fig. 2). Lying just above the inner ring, was a portion of the ileum, about one-third from its termination in the colon; part of the calibre of this was of a deep purple colour, and appeared as if it had been the subject of strangulation (Fig. 4). Below the constricted part, both the small and large intestines were empty. The other abdominal viscera were healthy.

Fig. 2. Shows an inguinal gland enlarged, and lying over the hernial sac.*

Fig. 3. A posterior view of the former preparation, showing the opening of the sac and the femoral vein upon its inside.

Remarks. The first point which attracts attention in the preceding case, is the number of maladies under which the patient laboured, viz.: abortion, uterine hæmorrhage, enlargement of the inguinal glands, femoral hernia, disease of the stomach, and cholera.

We are naturally, in the next place, led to ask, which of these last was the primary affection? In an illness of little more than forty-eight hours' duration, so soon attended with depression of the whole system, it is difficult to solve this question. It is not improbable, that chronic disease of the stomach might have been going on unnoticed for some time, by which perhaps she was rendered more liable, upon exposure, to be attacked by cholera; and that the great straining, which attended the effort to vomit, might have forced down the hernia. The hernial contents—a portion of small intestine—had become in some degree strangulated, as was evident from the engorgement of the intestine at one spot.

It may, in the third place, be asked, whether the intestine was down at the time that I made an examination of the tumour? This it is difficult, if not impossible, to determine. The *post-mortem* examination induced me to think that it was not, and justified, I think, the course which I adopted; the inguinal glands were evidently augmented; the tumour was quite as large after death as before; and the portion of intestine strangulated was found *within* the abdomen, and, although congested, its structure was not at all disorganized. It is, therefore, probable that the constriction was not of long duration.

* The accompanying wood-cuts have been executed by Dr. Westmacott, of King's College, from preparations in my possession.

That this woman was suffering from the influence of cholera, I infer from the *urgency* of the vomiting—the peculiar appearance of the fluid, and the *immense* quantity of it accumulated, with which the greater part of the small intestines was completely filled, notwithstanding the large quantity ejected—the peculiarity of the countenance and voice—the loss of pulse—the scantiness of the urine—the lividity and shrivelled state of the fingers and nails—and the conviction on the minds of three medical men, that such was the nature of the affection. Although diarrhœa, one of its characteristic symptoms, was absent, that does not prevent the disease from being cholera, as I believe that unequivocal cases of cholera have occurred without it; and the constriction upon the intestine sufficiently explains its absence in this case.

Fig. 4. The portion of intestine which had been incarcerated; the dark part representing the degree of engorgement that had taken place.

Since cholera has been raging in this country, it has been observed that many chronic maladies have apparently terminated fatally in cholera collapse. I have related in the *Medical Gazette* a case of long-continued hæmorrhage from the bowels, which was fatal in this way.[1] I have since seen a case of acute gastritis, with slough of the stomach, produced by oil of vitriol, which was attended, previously to death, with many cholera symptoms; and more recently still I have narrated in the same periodical[2] an extraordinary case of abdominal hæmorrhage, which was supposed to have been one of cholera; and I have alluded to a case reported to the Registrar-General as one of spasmodic cholera, but which, upon *post-mortem* examination, proved to have been hæmorrhage into the stomach from rupture of the gastric artery; but I have never before seen symptoms of cholera in conjunction with hernia.

XII. Strangulated Femoral Hernia—Rapid Collapse, supposed to be Cholera. Strangulated hernia, especially occurring in aged people, is frequently unattended with much pain; and is very likely, therefore, unless the surgeon be on his guard, to be overlooked. More than one case of this sort has come to my knowledge; and of this the following is an example.

Case xi. Strangulated Femoral Hernia—very copious Bilious Vomiting—sudden Collapse—Death in Thirteen Hours. A woman, aged 63, very sallow looking, thin and feeble, who had several times been under medical care for severe bilious attacks, accompanied with much exhaustion, and twice for hæmatamesis, sent for a medical man in haste one morning about eight

[1] Medical Gazette, vol. xiv, p. 137.

[2] Ibid. vol. xlii, p. 981.

o'clock. She was apparently quite well the preceding night, and playing at cards in high spirits, although she had had occasional pains in the back and lower part of the abdomen, and felt sick; but these symptoms went off, and she made a hearty supper. She was seized in the night, and again about six in the morning, with violent vomiting, having brought up nearly a chamber-potful of green bile. She was greatly exhausted, sensible, but able to speak *only* in a whisper. The face, particularly the nose, and the hands (especially the right, which she had out of bed), were quite cold. She had cramps in the legs; *no* pain in the abdomen. She had had *one motion the preceding day; and she remarked how regular her bowels had been lately*, and that without medicine. She was naturally of costive habit. No urine had passed. Ten grains of calomel were given immediately; sulphate of magnesia and sesquicarbonate of ammonia, with peppermint-water, were ordered every four hours; fomentations were applied to the calves of the legs, and beef-tea and brandy administered.

At 2 P.M. she had been several times sick; the matter now rejected was said to have been very offensive when passed, but was without smell when shewn to the medical attendant; it was of the colour and consistence of thick gruel, with a reddish-brown tinge. She was in a state of perfect collapse; there was no pulse at the wrist; the nose, face, and hands, particularly that out of bed, were very cold; there were violent cramps in both legs, which were drawn up in knots. A scruple of calomel was given immediately; half a drachm of aromatic spirits of ammonia was ordered to be taken every four hours; friction with mustard was applied to the legs; and the beef-tea and brandy were continued.

At 4 P.M. she seemed decidedly better. She was quite sensible and cheerful; had been sick only once; and had passed some urine, but in no great quantity. The abdomen was not distended, or tender on pressure; her skin, to the hand, was quite cold, although she said that to her it felt warm; there was no pulse at the wrist, but the cramps were gone.

She sank soon afterwards, however, and died at 7 P.M., thirteen hours from her first seizure. Upon finding her dead, the *possibility* of hernia crossed the surgeon's mind, and he examined the groins, when he perceived in the right a swelling of small size, equal, and very tense, pressure making no impression upon it. Upon making inquiry if she had been afflicted with rupture, her friend, who, singularly enough, was the subject of that malady herself, replied in the negative; and said that the patient had often congratulated herself that she was not thus affected. She was a woman of very weak digestion; and it was ascertained that she had lately been eating freely of pork, veal, and rabbit-pie.

DISSECTION, seventy-five hours after death: weather muggy, but cold. Putrefaction was commencing. The tumour was still very tense. Nothing was wrong in the chest. The liver was pale; there was some green bile in the gall-bladder. There was *central contraction of the stomach;* the intestines generally were slightly red; the *spleen* remarkably *small* and *black;* about three drachms of bloody serum were found in the abdomen. A femoral hernia existed on the right side; the stricture embraced very tightly a piece of ileum of the size of a nut.

(Figs. 5 and 6.) This strangulated intestine was of slight red colour; about two feet of ileum, a little above the strictured portion, were very much enlarged and distended, with reddish-brown looking fluid; the mucous membrane here was blackened from venous congestion. The other parts of the small intestines were contracted; the cæcum and colon natural. There was only a drop or two of fluid in the sac, and no effusion of coagulated lymph.

Fig. 5. Represents the small femoral hernia, the sac opened, the intestines congested, the femoral artery and vein with the vena saphena entering it.

Remarks. This case affords scope for many important inquiries. In the first place, it shows the great importance of an accurate examination of the abdomen, in all cases of serious interruption to the function of the gastro-intestinal canal. The surgeon was thrown off his guard, by having so often before attended this patient for biliary derangement. The very large quantity of bilious fluid vomited, clearly shewed that she was bilious now. There was a good deal of cholera in the neighbourhood at the time, and the case had comparatively few of the symptoms of hernia about it. The bowels had been open the previous day; there was neither pain nor tension of the abdomen, and there were symptoms not at all usual in hernia; pains in the back, cramps of the legs, and *copious* vomiting, together with collapse so severe and so rapid that the patient was dead in thirteen hours from the attack. I do not remember to have seen a case of hernia so rapidly fatal; and

patients have often recovered from operation, after strangulation of many days' continuance.[1]

Fig. 6. Exhibits the posterior view of Fig. 5; the intestine is seen entering the sac and firmly strictured by it; also the course of the epigastric artery on the outside of the sac.

Sudden collapse has been so generally associated with cholera, that I feel persuaded that association has led many persons into error, as it did the surgeon in this case. Collapse is owing to a depression of the nerves of organic life; and whatever tends to depress that system, I believe to be capable of producing collapse in no wise different from that produced by cholera. If that impression be correct, it will do much to take from cholera collapse as a diagnostic sign. Although it is to be regretted that the hernia was not detected, I doubt if any thing could have been done to save the patient. The taxis, from the tightness of the stricture even after death, I feel persuaded would never have returned it; and, from the moment she was seen, she was much too weak to have allowed either a warm bath, a tobacco injection, or an operation to have been suggested. Had she been seen earlier, and the hernia then discovered, it is just possible that an operation would have saved her life; although, from the great rapidity of the collapse, the absence of inflammatory action, the comparatively little congested

[1] Sir A. Cooper states, that a case has been fatal eight hours from the first appearance of strangulation, and that an operation has been successfully performed on the eighth day.

state of the intestine strangulated, and the central contraction of the stomach, so often seen in those who die a sudden death, there seems ground for believing that her attack, from its very commencement, was mortal. The state of her spleen was worthy of attention; its small size, and the pale, thin, half nourished appearance that she presented, seem to favour the opinion of those, who believe the function of that organ is concerned in the development of the red globules of the blood.

Conclusions. Having now narrated all the facts which I have to bring forward, it only remains for me, in conclusion, to state the inferences that I have drawn from them, with regard to the occasional complications of hernia.

1. Symptoms of strangulation may continue after a hernia has been apparently reduced—the reduction *en masse*, as it has been called. This may be owing to one of two causes; either to the return of the intestine to the upper part of the inguinal canal, and not into the abdomen, constriction therefore continuing at the internal ring; or to the return of the sac, together with the hernia constricted by it.

2. The intestine may be universally adherent to the sac. It is very important to ascertain this, and much may be learnt by pinching up the sac.

3. The direction of the vessels cannot be relied upon as a distinguishing mark between the intestine and the sac.

4. Mortification of the bowel may be simulated by the effects of tobacco; and, in doubtful cases, an operation ought to be performed.

5. Mortification of the bowel may be simulated, in some degree, by the collapse of jungle fever.

6. Foreign and irritating bodies *may* pass through an *irreducible* hernia without any ill effects.

7. The bowel may redescend after operation, may again become strangulated, and again require operation.

8. Strangulation may occur in a person the subject of double hernia; and a doubt may arise as to which is the hernia requiring operation. In such a case, the hernia that has existed the longest, and is most tense, should be the one first subjected to the knife.

9. A hernia may pass in an unusual direction.

10. Peritonitis may be coexistent with hernia, in cases where the latter is in no way implicated as a cause.

11. There may be a reducible hernia in one groin, an irreducible hernia in the other, and peritonitis.

12. Strangulated hernia may occur subsequently to peritonitis. If this could be known, it would be very desirable not to open the sac; if it be opened, and numerous adherent convolutions descend so as to prevent their being covered by the integuments, the gut should be punctured to diminish its contents.

13. Enlargement of the inguinal glands may be combined with strangulated femoral hernia, and cause great obscurity.

14. Strangulated femoral hernia in old, irritable, and weak persons, may be rapidly fatal from collapse, scarcely, if at all, to be distinguished from that which accompanies malignant cholera.

Camden Row, Camberwell, April 1851.

(To be continued.)

ON THE DIAGNOSIS OF INFLAMMATORY DISEASES OF THE CERVIX UTERI;

AND ON THE USE OF POTASSA FUSA OR POTASSA CUM CALCE IN THEIR TREATMENT.

By J. HENRY BENNET, M.D., late Physician-Accoucheur to the Western General Dispensary, etc.

(Read before the Medical Society of London, April 11, 1851.*)*

It is not my intention in the following paper to enter at length into the consideration of the symptoms of Inflammatory Disease of the Neck of the Uterus, but merely to give a brief and concise analysis of those symptoms, and of those moral rules which guide me in the cases requiring surgical examination and treatment. In the second edition of my work on *Uterine Inflammation*, I have already described the semeiology of these affections at such length, and with so strict an adherence to nature, that it would be mere repetition to do more. Indeed, although I have now had several years' additional experience since it was written, I find that I have but little to add, and nothing to alter.

The discussions which have taken place in this Society during the present session, have painfully convinced me that a less elaborate and more concise statement of the rules which I follow myself, and which I have laid down in the above-mentioned work for the guidance of others, in the diagnosis and treatment of these diseases, is required to justify my practice. My name and authority have been positively appealed to, as a sanction for the surgical scrutiny of the uterine organs of many hundred females who had no uterine disease; and this extensive scrutiny appears only to have led to the discovery of a limited number of instances of disease, so slight as to give way to mere injections and general treatment. Now I must be allowed, before I proceed, most emphatically and most solemnly to repudiate any connexion, as an author or as a practitioner, with such unheard of and such unwarrantable practice. The rules of diagnosis which I have given are meant to lead to the recognition of positive disease, and not to sanction the satisfaction of a morbid curiosity as to the state of organs, which there is no excuse for bringing into view by surgical means, unless we have the conviction that they are the seat of disease, and of disease not to be cured by other than surgical appliances. That the conscientious application of these rules by all practitioners, imbued with a due sense of the great responsibility of their position, does lead, all but invariably, to the recognition of such disease, is proved by my experience, and by that of hosts of talented practitioners, whom I may claim as converts to my views, and whose names I could mention, were it necessary. I may safely say, that I do not make an instrumental examination of the uterine organs once in six months, without finding sufficient disease to justify the step, so careful am I first, by oral inquiry, to be all but certain that disease really exists. Indeed, the mistakes I myself make are generally on the other side; for it not unfrequently occurs, that after treating a patient in vain by general means for several months, without making a surgical examination, on account of the obscurity of the local symp-

toms, I at last find a key to the failure in the existence of local disease, which I did not at first consider myself warranted in looking for. That such will generally be the case I am convinced, however fully the pathological views I defend may be adopted,—at least with all conscientious practitioners, who treat with due respect the females who entrust themselves to their care; and who, acting thus, are as careful and as mindful of the delicacy and the feelings of the patients who come under their notice as claimants on the funds of medical charities, as of those belonging to the higher ranks of society. With a conscientious observance on the part of the profession of those moral scruples which guide surgeons in all painful and repulsive surgical examinations, such, for instance, as that on the bladder for stone, or on the rectum for polypus or fistula, there will be always more risk of uterine disease being overlooked, than of undue interference with the female organisation.

It is for the heads of the profession, for those who take upon themselves to guide their fellow practitioners, to prevent *abuse*, by accepting the legitimate and rational *use* of those surgical modes of exploration and treatment, which modern research has proved to be absolutely necessary to restore the uterine organs to integrity, in a very numerous and distressing class of diseases. This few have as yet done. Some, appealing to their past experience, which, however extensive, is in reality valueless, when brought to bear on newly-developed pathological facts with which they were unacquainted at the time it was gained, have boldly and openly negatived the facts and doctrines I have brought forward; others have attempted to investigate the subject, but, for want of practice in the necessary instrumental explorations, have often failed to detect disease when present,—a circumstance which I am continually seeing exemplified; whilst one or two, by an indiscriminate and senseless abuse of these means of exploration, have fairly exposed themselves to the inculpation of having abused them to an extent of which the records of the profession, either at home or abroad, can afford no parallel. Craving indulgence for these preliminary remarks, I will now proceed to the consideration of the subjects upon which I more especially wish to dwell.

The cervix uteri and its cavity are lined by a mucous membrane, highly organised, and abundantly supplied with mucous follicles, which is very liable to take on inflammatory action, like all other functionally exposed mucous membranes, and to subsequently become the seat of inflammatory ulceration. This important pathological fact, which has only recently been brought to light on the continent by the instrumental exploration of the organ, was not acknowledged or acted upon in this country, when I first drew the attention of the profession to it some years ago. At the same time, its recognition is of the most vital importance to science and humanity, as, in uterine pathology, all is and must remain in inextricable error and confusion, if it be repudiated. The frequency of ulceration in this region, in well marked cases of disease, as compared with other uterine lesions, is, indeed, so great, that out of 243 cases of inflammation of the uterus or its neck, treated by me at the Western General Dispensary, and given at the end of my work, ulceration of the latter part existed in 222. The

explanation of the frequency of ulceration in the cases examined by me is to be found in the facts, firstly, that slight fugitive catarrhal inflammation in this region often no doubt occurs, but without giving rise to sufficiently marked symptoms, local or general, to warrant any kind of local examination at the hands of a really scrupulous observer, such as I trust I may claim to be, and consequently is not often seen by him; and, secondly, that when inflammation does not subside spontaneously, it is aggravated by each successive menstrual congestion,—menstruation feeding uterine inflammation, and exercising a most pernicious influence over it in the great majority of cases; and thus is called into action the peculiar liability to ulceration presented by this mucous membrane. The tendency in this region to the perpetuation of inflammatory and ulcerative disease, when once it has manifested itself, is certainly most remarkable; it is greater even than in the fauces, and impresses upon the inflammatory affections of the cervix and its cavity many of their peculiar characteristics. Indeed, it is owing to the obstinacy, and to the intractable nature of the disease in those cases which alone ought to come under the *eye* of the practitioner, that surgical appliances, and consequently surgical examinations, become necessary.

The symptoms presented by patients suffering from inflammation and inflammatory ulceration of the cervix uteri, may be summarily divided into local and general. The local symptoms are: pains in the lumbo-dorsal, ovarian, and hypogastric regions, and down the thighs, with, in some instances, difficulty of walking; a sensation of bearing down on standing or moving; vaginal discharges; modifications of the menstruation, giving rise to dysmenorrhœa, menorrhagia, or amenorrhœa; constipation or diarrhœa; and irritability of the bladder. The general symptoms are principally dyspeptic, neuralgic, and hysterical conditions; entailing, secondarily, defective general nutrition, and consequent debility and anæmia.

All these symptoms, local and general, have been analysed so minutely in my work on Uterine Inflammation, that it is unnecessary for me to do more than to enumerate them. Were they always combined in each patient, nothing would be easier than the diagnosis of the disease; but such is by no means the case. Sometimes well marked local symptoms of disease will exist for years, without any general reaction, the general functions and health resisting and remaining good. In other instances, with the same amount of disease, there will scarcely be any local evidence of its presence, but the health will fail from the first, the disordered general condition resisting every means of treatment, until the local disease be treated and removed. These are the difficult cases in practice. From the extensive connexion between the nervous system of the uterus and other parts of the sympathetic and cerebro-spinal systems, the general morbid reactions to which disease of the uterus may give rise are protean. There is scarcely an organ in the economy, or any portion of the cerebro-spinal nervous system, which may not be sympathetically affected when uterine disease, and more especially inflammatory ulceration of the cervix, exists. Such being the case, it behoves us, in chronic general derangement of health in the female, not to omit analysing the state of the uterine organs; and, if the general morbid condition prove intractable, not

yielding to those medicinal and hygienic means which, in such conditions, are *habitually successful*, we are warranted in suspecting uterine disease, and in investigating the state of the uterine organs, provided one or more of the local symptoms enumerated be decidedly and constantly present.

If, in obscure cases, these elements of diagnosis are conscientiously and carefully weighed and acted on, without rashness or precipitation, the patient having the benefit of any doubt,—that is, being first treated generally, and by simple local means, such as injections, etc., if the local symptoms are so slight as to render the existence of decided uterine disease dubious,—very few errors of diagnosis will be committed, and very few females will be submitted to surgical examination who are free from disease, or only present such slight morbid conditions as not to require surgical assistance.

Were inflammatory and ulcerative disease of the cervix always limited to the external region of the uterine neck, and were it always discovered and treated before induration and hypertrophy had taken place, and before the ulcerative process had become chronic and confirmed, simple non-surgical means of local treatment, and attention to the general health, would no doubt suffice to cure the greater number of those so affected. But such is very far from being the case. Owing to the frequently obscure nature of the local symptoms, and to the length of time during which the disease may exist before it reacts sensibly on the general health, it has generally long been present when complained of and discovered, and has thus become so deep-seated and confirmed, and has given rise to so many structural changes, that surgical treatment alone can remove it; and hence the unavoidable necessity for the use of the speculum, in aid of treatment as well as of diagnosis. Moreover, there is an important feature in the history of these affections, which would be of itself sufficient to convince the most prejudiced of the necessity of surgical interference, were they to carefully observe nature, and not merely to reason on past experience, which, as I have already stated, is useless when new facts are brought forward. I allude to the circumstance of the inflammatory and ulcerative element, in the immense majority of cases, passing into the os and cervical canal. Owing to this very general extension of disease to a region which is beyond the reach of mere injections, these latter remedies, the only efficient local means of treatment that can be used without instrumental assistance, are, as a general rule, powerless to eradicate the disease. Indeed, we might as well try to cure gonorrhœa in the male by merely washing the gland with medicated lotions.

When properly used, however, injections invariably do a great deal of good; they remove inflammation and congestion of the vulva and vagina, diminish and limit the cervical inflammation, and, in some instances, lead to the healing of the more external and exposed part of the ulcerated surface. If, at the same time, strict attention is paid to the digestive functions, and to the health generally, the patient generally improves; the leucorrhœa, if present, is arrested; she loses many of the symptoms from which she is suffering, or at least they become mitigated; and both she and her medical attendant think that the morbid state is subdued. As soon, however, as the patient is left to herself, the disease, which has only been modified, not cured, begins to regain the

ground it had lost. Each successive menstrual period aggravates the symptoms, and in the course of a few months, the patient finds herself as bad as, or worse than before she was treated. She then, probably, consults some other practitioner, leaving her former attendant in the happy belief that he has cured her.

To resume: the physical examination of the uterine organs may be not only warranted, but rendered necessary by the presence of the local or general symptoms enumerated. If all, or nearly all the local symptoms I have mentioned are present, the case is a model one, respecting the nature of which there can be no doubt; and, as the local lesions are nearly invariably such as to require surgical treatment, the sooner the state of the patient is thoroughly cleared up the better. If one only of the local symptoms is present, but constantly present, and in a marked manner, and general symptoms are met with which do not give way to properly conducted treatment, there is also sufficient reason to suppose that local disease exists to warrant an examination. The mere existence, however, of disordered general health in a female, of dyspeptic and nervous symptoms, of debility and anæmia, is no proof whatever that she is labouring under uterine disease. These conditions may be the sympathetic result of scores of morbid causes and diseases.

The practitioner having thus acquired, by a careful oral analysis of his patient's symptoms, or, if in doubt, by the test of treatment, the conviction that she is labouring under decided uterine disease, what is the next step to be taken? Is she to be at once examined with the speculum? Most undoubtedly, most unquestionably not, until the state of the uterine organs has been ascertained by a digital examination. The condition of the body of the uterus, its size and position, can only be ascertained by the finger; and this may also be considered the best guide as to whether an instrumental examination be required or not. As I have elsewhere stated, when the mucous membrane covering the cervix uteri is ulcerated, the ulceration nearly invariably occupies the circumference of the os into which it dips, and which is more or less patent. Simple inflammation also, passing into the cervical canal, expands and dilates the os. Hence we have a very valuable diagnostic rule, which is now my principal guide as to the necessity for a specular examination. The latter I consider indicated and warranted, whenever the os is sufficiently open to admit the end of the finger. When this is the case, there may be either ulceration requiring local surgical treatment, or inflammation passing into the cervical cavity, which also necessitates surgical appliances. I would likewise add, as requiring instrumental examination, the cases in which the finger detects marked induration and hypertrophy of the cervix. When these latter conditions exist, it is impossible to judge what precise course of treatment is to be followed, unless the diseased parts be brought into view. The open state of the os is a most invaluable guide as to the presence of inflammatory disease, and the fact of its being so ought to be generally known. It is mentioned by Pauly in his edition of *Lisfranc's Lectures*, but has been lost sight of by French writers, and is generally, if not always, only alluded to by them as a physiological condition, which it is not. It is only within the last few years, that I have myself appreciated its great importance as a means of diagnosis. The os uteri, in

the healthy state, is perceptible to the finger as it passes over it, but the finger, or even its tip, does not pass into it; and, if it does, we are warranted in suspecting disease, unless the patient be pregnant, or recently confined, or the uterus be aggrandised by the presence of a fibrous tumour, etc.

When an instrumental examination has been decided on, it must be efficiently made. Whatever speculum may be used, the result cannot be considered satisfactory, unless the entire organ be brought within the field of vision, and unless it be so illuminated by daylight that a speck of dust would be visible, on any part of its surface. If the os be very open also, a bivalve speculum will alone enable the practitioner to correctly examine the state of the parts. By the expansion of its valves, the open lips of the os can be separated so as to allow the eye to penetrate more or less into the cervical canal, especially if, at the same time, these lips are depressed or elevated with the uterine sound. For a practitioner to state that he is never able to bring into view the interior of the cervical canal, with the assistance of the above rules, when the os is morbidly open, is merely to acknowledge his want of surgical dexterity or practice. Such an assertion proves, at the same time, that a host of important lesions must have escaped notice.

The cases for examination having been thus properly selected, and the investigation having been carefully and efficiently carried out, we find that the lesions brought to light are those which characterise subacute and chronic inflammation of mucous membranes in any and every part of the economy, including ulceration, which is found to exist in the great majority of cases. This latter assertion has been contested and even denied, but without any real foundation. Some of those who have taken this position, have done so from positive ignorance; they have attempted to negative facts, the result of extensive and amply corroborated experience, without endeavouring to test those facts. Others, not able to deny the frequent existence of inflammatory lesions in this region, have asserted that these lesions are seldom or never ulcerative, and that they constitute a form of granular inflammation. No one as yet, however, has deigned to give a definition of what this nondescript granular inflammation really is. French pathologists, and myself, following in their footsteps, have described as granular inflammation of the cervix uteri, a morbid state characterised by chronic inflammation of the mucous membrane, and of the mucous follicles with which it is studded, without abrasion or erosion of the epithelium,—in a word, without ulceration. When the cervix presents this form of the disease, the inflamed and hypertrophied follicles stand out prominently, and give to the organ a kind of strawberry appearance. Some of these follicles are occasionally ulcerated, forming small separate aphthous sores; but this is rarely the case.

In common with the continental pathologists who have preceded me in the study of these diseases, I give the name of ulceration to a state characterised by the absence of the epithelium, as the result of a morbid action, and by the presence of erectile granulations, similar to those which cover all granulating sores or wounds healing by the second intention. It is of little importance whether these granulations are so small as to be microscopic, or so large as to be fungous; in both cases the morbid condition is identical; in both cases there is loss of

substance, although there may be no excavated surface or raised margin; although even the granulations may overtop the surrounding surface. Indeed, we see this occurring daily, in all suppurating sores on the skin, as well as in the deeper tissues. That there is loss of substance, becomes evident if a granulating surface like this is submitted to maceration after death, as is seen in a pathological specimen, consisting of the uterus of the young virgin female whose case I have narrated in my work. In the diseased region there is found evident loss of substance, an *excavated* ulceration of the mucous surface surrounding the os. The mucous membrane is absolutely destroyed in some places, and the proper tissue of the cervix underneath neatly dissected out. How it can be said that there is no proof before the profession of inflammatory ulceration of the cervix in the virgin, considering the publicity given to this case, I cannot conceive. Moreover, this case is not mine, but one supplied to me by my late colleague, Mr. Anderson, the senior-surgeon to the Western General Dispensary. I have no hesitation in saying that, in this instance, during life, the evident loss of substance was certainly concealed by the erectile granulations (pus and sanies-secreting), which cover all suppurating sores; and that, consequently, according to the "new pathologists", it would have had to be called a granular inflammation. In the wax model of inflammatory ulceration, the condition during life of such a surface is well demonstrated.[1]

That the views, which I have just explained, agree with the definitions of ulceration given by the most classical writers, will be evident to any one who gives himself the trouble to refer to them. Thus, to cite only two or three authorities, Samuel Cooper says, that "ulceration is the process by which sores or ulcers are produced in animal bodies"; Boyer, that "an ulceration is a solution of continuity of the soft parts, more or less ancient, accompanied by a purulent secretion, and kept up by some local or internal cause"; J. L. Petit, that "an ulceration is a solution of continuity, from which is secreted pus, or a puriform, sanious, or other matter."

With reference to inflammatory ulceration in virgins, I can only repeat what I have stated elsewhere, that I am never without well-marked cases under my care, and that, in the results obtained, these cases are amongst the most satisfactory that I am called upon to treat; young females, to whom life had been a burden for years, and who had lost hope, being frequently restored to robust health. I do not mean to say, for a moment, that such forms of disease are common, but that they exist; and, in large consulting practices, they must be not unfrequently met with. If I have myself seen so many, it is, no doubt, from the circumstance of my having been the first to direct the attention of the medical profession to the existence of such disease. Thence it is, that I am frequently appealed to in cases in which it is suspected. At the same time, I now most emphatically repeat what I stated when I first made my views known: that I consider that a surgical investigation, in such cases, ought to be adopted only as a last resource,—as one that ought not even to be thought of, until every pos-

[1] The diseased uterus, above referred to, and the wax model, were exhibited to the Society.

sible and available means of treatment has been tried, and has failed; and until it is evident that the patient is doomed to hopeless misery, unless the disease, which is known to exist, be brought to light and grappled with. Then, and then only, is the medical attendant authorised to contemplate such a step; and, even then, the responsibility is so great, that, as I have stated, it ought to be shared, and a consultation held, unless the practitioner be himself a consulting accoucheur, and sufficiently confident in his own experience and judgment to assume the entire responsibility of his conduct. This is the advice which I have ever impressed, in all my writings on the subject. I can also most positively say that, although I have treated many patients of this class, I have never made a physical examination in a virgin female, in a single instance, unless the patient had been treated in vain for years by others, or for months by myself, by means directed both to the uterine and to the general symptoms.

The treatment of the local element in inflammatory affections of the neck of the uterus, which I adopt, may be given in a few words; it is the treatment followed in all chronic inflammatory diseases situated in a position attainable by surgical means. If there be any acute or subacute inflammation present, it must be subdued by antiphlogistics and astringents. When once this has been accomplished, the morbid action still persisting must be modified and converted into healthy vital action by stimulants. Thus, in the first stage of treatment, we use emollients, leeches, and astringent lotions; in the second, we apply to the diseased surface caustics, in order, secondarily, to set up healthy action. The eschar, which they produce, is eliminated and thrown off by a process of vital inflammation, which tends to restore the healthy condition of the diseased surface. The intensity of the stimulant to be used depends on the chronicity and sluggishness of the disease, and on its resistance to therapeutic means. In recent and slight cases, the nitrate of silver is sufficient; but when the morbid state penetrates below the surface, and the submucous tissues are diseased and hypertrophied, it is generally insufficient, and stronger agents, agents which produce a greater reaction, are required. Then it is that the mineral acids should be used. Occasionally, however, even these fail when the disease has existed many years, and there is considerable deep-seated chronic inflammation and hypertrophy. It is in such instances that potassa fusa, or potassa cum calce, proves a most invaluable remedy; inasmuch as, by its means, any amount of vital reaction, that is required, can be obtained. Since I have known its use, that is, for the last fourteen years, I have not met with any case of inflammatory disease of the cervix which has not eventually given way. But it is more especially since I have simplified the application of potassa cum calce, by running it into fine cylinders, like those of nitrate of silver, that it has proved invaluable to me; inasmuch as it has thus been rendered nearly as easy of use, and as free from risk in application, as the nitrate of silver; moreover, it may thus be much more easily graduated at the will of the operator. I must, however, again impress on my hearers that I never apply potassa cum calce to destroy tissues, but merely to set up healthy eliminatory inflammation, under the in-

fluence of which, indurated and hypertrophied tissues melt and are resolved, and morbid surfaces become healthy and heal.

I was induced, some years ago, empirically to apply, with great caution, the smallest sized potassa cum calce cylinders to the cervical canal, in intractable inflammation, as a last resource; and with great success. This success I now attribute to the fact of its reaching, by its more powerful action, the inflamed mucous follicles which lie between the radiations of the arbor vitæ, and are thus subtracted from the influence of milder agents.

Potassa fusa was first introduced as a remedy in these forms of uterine inflammation by M. Gendrin of Paris, but had not been adopted by the profession when I left that city, nine years ago; although, I believe, it has since been more favourably received. I can myself claim the merit of having introduced it into practice in this country, and of having simplified its use as above mentioned. I am continually using it with proper precaution, avoiding scrupulously the acute or subacute stages of disease, and never meet with any accident. I may say the same, as far as I am aware, of the numerous practitioners who have adopted it, throughout the country, on my recommendation. I must, however, caution those who would use it inside the os, to apply it very gently, and to guard against the too great closing of the cervical orifice, as the surface touched heals. For want of these precautions, in several cases treated in the country, in which I have been consulted, the os uteri has been all but closed. The dilatation of the contracted os is always easily accomplished when this is the case, by means of graduated bougies; but each contraction had better be prevented by proper judgment and care in the first treatment of the patient.

9, Cambridge Square, Hyde Park, April 1851.

BIBLIOGRAPHICAL RECORD.

Annual Address delivered before the Hunterian Society of London, Feb. 19th, 1851. By John C. W. Lever, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, Guy's Hospital. Printed for the Author. 8vo, pp. 23. Southwark (London): 1851.

Puerperal Fever is the subject of this address; and it is very ably and very instructively handled by the author. Dr. Lever's opinions being those of an accurate, independent, and accomplished observer, and being based on a twenty years' experience, in a very wide field of observation, have special claims upon the notice of the profession. They coincide, to a great extent, with the views of Dr. Fergusson, as to the nature of the different forms of the disease; of Mr. Nunneley, as to the relationship between puerperal fever and erysipelas; and of Drs. Simpson and Henry Kennedy, as to the analogy between surgical and puerperal fever.[1] Dr. Lever emphatically reprobates the recklessness of those practitioners who attend women in labour, immediately after dressing erysipelatous sores, performing *post-mortem* examinations, or visiting those labouring under puerperal fever, or bad forms of erysipelas. He thus concludes his remarks on this subject: "So convinced am I of the contagiousness of this disease, that I confess I have no

[1] London Journal of Medicine for January 1851, p. 77.

sympathy for those who, with these indisputable facts before them, lose case after case, from being themselves the vehicles of contagion ; gladly received into homes where hope is budding, and all joyful anticipation, they but resemble the destroying angel, for, instead of mirth, congratulation, and merriment, they leave sadness, gloom, and desolation."

THE HISTORICAL RELATIONS OF ANCIENT HINDU WITH GREEK MEDICINE, IN CONNEXION WITH THE STUDY OF MODERN MEDICAL SCIENCE IN INDIA ; being a General Introductory Lecture, delivered June 1850, at the Calcutta Medical College. By ALLAN WEBB, M.D., Author of the *Pathologia Indica ;* Surgeon in the Bengal Army ; Professor of Descriptive and Surgical Anatomy. pp. 34. Calcutta : 1850.

THIS is an introductory discourse which was delivered by Professor ALLAN WEBB, at the opening of the sixteenth session of the Calcutta Medical College. It is mainly occupied with "an examination into the state of medicine in India, previous to the introduction of European science, and with a comparison of it with medical science among the Greeks ; especially as respects —I. *Anatomy ;* II. *Physiology ;* III. *Pathology and Practical Medicine.*"

In Anatomy, the knowledge of the Hindoos was most limited, being only obtained by rubbing with a brush a body which had undergone putrefaction for seven days. Dr. Webb refers to the beautiful muscular expression and anatomical correctness of the Grecian sculptures ; and states that even "the most perfect specimens of Hindoo art—the relievos in their most ancient cavern temples, show nothing that for truth or form can compare with Greek specimens of art". These sculptures give no evidence that the Hindoos had ever attained to a knowledge of the muscles, or of their power of expression.

In Physiology, we have the "elementary theory" present, both in Hindoo and in Greek medicine. Hippocrates and Plato among the Greeks, and Charaka and Sushruta among the Hindoos, all agreed in teaching that fire, air, earth, and water, were the constituent elements of their human body ; and to these the Hindoos added *ether (akasa).* The following specimen of physiological doctrine is given by Dr. Webb, from the writings of Sushruta, the Galen of India. "'When digestion is accomplished, the respective elements unite with those which had entered into the formation of the body : the earth unites with earth, water with water, etc.; and they, acting on the inherent qualities of each of the five elements, mix and increase those in the body ; smell, the property of earth, with that of the body, taste with water, touch with air, and sound with ether.' This", says Dr. Webb, "is exactly what Empedocles taught—viz., that sensation takes place only through the affinity of elements composing the object perceived, with the elements of the perceptive organs or senses".

In the Hindoo system, air, bile, phlegm, and blood, are the chief humours of the body ; and these four words "as fully explain the mysteries of Hindoo pathology, as '*pax vobiscum*' represents in the mouth of Wamba, the son of Witless, all requisite learning, all monkish theology". Now these potent agents—air, bile, phlegm, and blood—are dealt out by Plato, just in the same style as by Charaka and Sushruta, as being, when deranged, the source of all diseases. And Dr. Webb brings forth very cogent internal evidence to prove the Hindoo origin of the Greek medical philosophy. "When we remember that Pythagoras introduced Brahminical institutions into Greece ; that he, as well as Plato, believed in the transmigration of souls ; that Hindoos never travelled, but Greeks did ; we can have very little doubt, that India was the source whence the Greeks derived their system of philosophy and of medicine. The analogy between the Hindoo and Greek systems of medicine is certainly much too close to be the result of accident": and this view is strengthened by the remarkable similarity in the writings of the philosophers of the two nations.

Such was the state of professional darkness among the Hindoos, until the institution of the Medical College in Calcutta in 1835; and, among the triumphs which are gradually being gained over prejudices, one of the most important has been the engaging the Mahomedan Hindustani students in the dissection of the human body. For this, the enlightened Hindoo practitioner will have to remember with gratitude the energy of Dr. Goodeve, and Pundit Moodoosudun Guptoo. "We must all rejoice", says Dr. Webb, "at the success of this great experiment, which has, in the vernacular tongue, brought within the grasp of the people that knowledge which is of all others the foundation of medical science. Now that the splendid work on Anatomy, which my colleague Dr. Mouat has completed, in the Oordoo language, is in the hands of these students, their difficulties are much less. It is, I apprehend, the first work upon the subject which has been compiled for Mahomedan students since the days of Galen."

Notwithstanding the miserable condition of the Hindoo pathology, it has been said that their practical medicine was in a better state. "In therapeutics, we hear of cures now-a-days of epilepsy and lepra, by combinations of drugs reputed to be of great antiquity. Professor Royle proves that Greeks and Arabs borrowed from their materia medica. In midwifery, we find that embryotomy was practised, and rules laid down for delivery. In surgery, lithotomy is described, operations for new ears and noses, for piles, fistula, cataract, etc." And Dr. Webb, who is a believer in mesmerism, mentions this practice as among the most curious relics of Hindoo medicine. The operation for cataract is fairly described by Sushruta, and was generally practised in India before the English arrived in that country. The itinerant *Baidias* sometimes poke out eyes; but Dr. Webb has seen many to whom they have restored sight. It is very probable also, that lithotomy was commonly practised at a period (A.D. 1460) when European surgery was in such a low state, that Colot, in Paris, was obliged to beg a man's life from the gallows to prove that the operation was not mortal!

Much good may be hoped for—and, indeed, we may say, has already resulted—from the establishment of the Calcutta Medical College, and from the diffusion of European science among the natives of India. We are glad to notice the following encouraging tidings of four young Hindoos, who were a few years since sent to England to pursue their medical studies in University College. "Dwarkanath Bose was the first of our gallant band of medical pioneers, to return to us with the diploma of the Royal College of Surgeons. He is now one of our teachers of anatomy. Soorjoo Coomar Chuckerbutty, just returned with the diploma of the London University, is Assistant-Physician to the College Hospital. Drs. Seal and Bose both hold appointments in this city."

Before concluding, we may record, in connection with the above subject, our satisfaction at observing that Persia, Abyssinia, and Hawaii, had last session furnished students to the Medical School of Paris. And, at the same time, we must express the disgust which we felt at reading that some students at a medical college in the land of liberty, equality, and fraternity—America—had sought, though ineffectually, to deprive some coloured persons of the privilege of attending lectures. We wish success to the Indian Medical Colleges, and to all attempts to diffuse sound knowledge, special or general, among the less civilised nations; and we would rejoice to hear that Drs. Quashi and Sambo had gone forth, enlightened with European knowledge, to practise the healing art among their brethren of Congo or Guinea, and to introduce to them the comforts and blessings of civilisation and Christianity.

We recommend Dr. Webb's Lecture to all, who are interested in the subject of which it treats.

A Letter to the Rt. Hon. Sir George Grey, Bart., M.P., on Medical Registration, and the Present Condition of the Medical Corporations. By Emeritus. pp. 22. London: 1851.

Of all the pamphlets that have appeared during the excitement attending the medical reform question, this is one of the best. It is evidently written by one who has no interested motives to bias his mind in favour of any of the present Corporations; and, indeed, from the fact, that he dates his pamphlet from the London Custom House, and from the title which he chooses for his *incognito*—Emeritus—it is evident that he no longer practises the medical profession. He does not, however, fall into the opposite error of pouring out indiscriminate abuse against all the licensing and examining bodies; but he very judiciously, as we think, points out the peculiar defects in the existing systems, and recommends plans for their amelioration. His chief object in this pamphlet appears to be, to recommend the establishment of an uniform system of registration of medical practitioners; a proposition so reasonable, that we cannot but wonder that it has never been adopted. The chief defect in previous plans of registration was, that the mere registration was to give almost a legal right to practise, and the effect would have been to confound all distinctions in the profession; a consummation which we certainly do not desire. But Emeritus recommends that all persons who register, should also append their qualifications; the effect of which plan would be, as we conceive, not to confound the grades of the profession, but distinctly to denote them: and the public would then no longer be excusable for sending for a licentiate of Apothecaries' Hall, possessing no other qualification, to set a broken leg or operate for a hernia; nor, on the other hand, would they send for a member of the Royal College of Surgeons of England, possessing only that qualification, for the treatment of pneumonia or hydrocephalus. In many of the views concerning the defects of existing systems, we heartily concur with the author of the pamphlet. We agree with him, that a pupilage of one or two years would be better than the present system of a compulsory apprenticeship of five years; that the diploma of medicine ought not to be given, as it is in the Scotch Universities, at the early age of twenty-one, and after a curriculum of education and an examination in no degree superior to those of the London Apothecaries' Company; and that the present system of granting diplomas by the London College of Surgeons is very defective, because, in the words of the author, "the limited examination of the Royal College of Surgeons, London", enables the members to obtain a sanction, "by which, without having passed any examination in many important branches of medical science, they impose upon the ignorance and credulity of the public in medical matters; and though imperfectly educated, and only half examined, they practise every branch of the profession, even in this country, but particularly in the colonies, and on board of emigrant ships, to which they should never be appointed on the strength of the diploma of the London College. If this had been attended to, the surgeons attached to those vessels would have been a more educated, and consequently superior class, and might have checked the disgraceful scenes reported to have lately occurred on board those ships. It also has the injurious tendency," adds the author, "of lowering the standard of medical education, and of causing many idle and ignorant medical students from Scotland and Ireland, to pass for surgeons the College of England, who are tempted, by the reduced scale of examination, to avoid the more extensive one of the Scotch and Irish Colleges; and it is even said," (but here we hope our author is in error,) "that their rejected candidates have subsequently passed, and found almost immediate admission into, the London College."

We conclude by repeating our good opinion of this pamphlet; and although, from its bold and independent tone, it is not likely to obtain favour from any of the Corporations, we think that, on that very ground, it

ought to attract the attention of Government. The plan of registration is so simple, and its advantages so great, that we wonder it is not adopted without delay.

Das Schraeg Verengte Becken nebst einem Anhange ueber die wichtigsten Fehler des weiblichen Beckens ueberhaupt. Von Dr. Franz Carl Naegele. Mit sechzehn Tafeln. Zweite Ausgabe. Mainz: 1850.

[The Obliquely Contracted Pelvis, with an Appendix on the most important Defects of the Female Pelvis generally. By Dr. Franz Carl Naegele. With sixteen Engravings. Second Edition. pp. 118. Mayence.]

Dr. Naegele informs us, in his Introduction, that, so long as thirty-four years ago, he observed the first two specimens of the peculiar variety of pelvic deformity, which forms the subject of his present work. He was then struck with the difference which existed between this deformity, and that which results from rachitis and mollities ossium, and was led to regard the disease as one of a peculiar and undescribed kind; but it was not until the year 1828, that he succeeded in meeting with a pelvis, in his own practice, which presented the same deformity as the two which had previously engaged his attention. Since that time, he has caused investigations to be made, both by himself, and by his friends and pupils, in search of similar deviations from the natural structure; and these researches have been rewarded by the discovery of various similar cases of malformation of the female pelvis.

The distinguishing characters of this deformity are, complete anchylosis of one sacro-iliac symphysis, or complete union of the sacrum with one ilium; a wasting or defective formation of the lateral half of the sacrum, and diminished breadth of the anterior sacral foramina of the side where the anchylosis exists; on the same side, a diminished breadth of the os innominatum, and a diminished size of the ischiatic notch; and, in addition to these peculiarities, the sacrum appears to be pushed in towards the side of the anchylosis, and its anterior surface, on this side, is also more or less shortened, while the pelvic symphysis is pushed over to the opposite side, and thus this symphysis stands not on a level with the promontory, but obliquely opposite to it; and, on the side of the anchylosis, the interior surface of the lateral wall, and of the lateral half of the anterior wall of the pelvis, is less hollowed, or flatter, than in the normal pelvis.

Such is a brief description of this very interesting deformity, for the elucidation of which the profession is much indebted to Dr. Naegele. His work is illustrated by sixteen very beautiful engravings, most of them coloured; and, altogether, the work will add to the reputation of the late distinguished professor. In conclusion, we must add that several preparations similar to those described by Dr. Naegele exist in the museums of this country.

De Acidi Osmici in Homines et Animalia Effectu Commentatio Physiologica. Scripsit Prof. Dr. F. Branell, Vimariensis. pp. 117. Casani: 1849.

This is a dissertation upon the physiological effects of a substance hitherto very little known in its relations to the animal system. Professor Clausius, while examining the residue of the platinum ores, was struck by the singular properties of the vapours of osmic acid, as exhibited upon his assistant and his servants; and hence Dr. Branell was led to investigate more closely the powers of this acid. He therefore instituted a series of experiments on various animals, which occupied him for four years, and the results of his investigations are contained in the present treatise. The author deserves great credit for his industry in conducting this extensive series of experiments; and his treatise is a very good specimen of a toxicological monograph.

ALPHABETICAL CATALOGUE

Of the Papers which have appeared in the French Medical Journals for 1850.

BY ALEXANDER HENRY, M.D.

(Concluded from p. 366 of last Number.)

THE following are the Journals referred to in this Catalogue, with the abbreviations used.

Bulletin de l'Académie Nationale de Médecine ...	Bull. de l'Acad. de Méd.
Comptes Rendus de l'Académie des Sciences ...	Compt. Rend.
Archives Générales de Médecine	Arch. Gén. de Méd.
Bulletin Général de Thérapeutique	Bull. Gén. de Thér.
Gazette Médicale	Gaz. Méd.
——— des Hôpitaux	Gaz. des Hôp.
L'Union Médicale	Union Méd.
Annales d'Oculistique	Ann. d'Ocul.
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CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

HEMLOCK POULTICES AND CALOMEL IN THE ASCITES OF CHILDREN.

In 1849, M. Trousseau tapped four children for Ascites: they all died. From this and similar considerations, he has been led to adopt and recommend calomel in small doses, followed by the application of hemlock poultices to the abdomen.

The calomel is given to the amount of 2½ *centigrammes* (rather less than half a grain) daily, divided into six doses. At the end of six days, at the farthest, salivation takes place; there is also occasionally diarrhœa. The calomel is now discontinued, and hemlock cataplasms are kept constantly applied to the abdomen. These are prepared by rubbing up two spoonfuls of powder of hemlock in some thick linseed-water, which is then spread over a linseed-meal poultice. This is as efficacious as the pure hemlock cataplasm, which is prepared with 200 *grammes* (nearly 6½ ounces) of hemlock powder in a sufficient quantity of hot water. M. Trousseau has long recommended its application to the chest in phthisis.

Under the successive influence of the calomel and the hemlock poultices, the abdominal effusions are absorbed, even under the most unfavourable circumstances. And we may here call attention to a principle which M. Trousseau has derived, we believe, from M. Recamier, and which he never ceases to repeat in his clinical lectures; that, in the treatment of apparently incurable diseases, we should take our stand on a favourable diagnosis, and not assume an irrevocably fatal termination. Pathological anatomy has shewn us the true relations of many diseases supposed to be essential; but it has led us also into an opposite extreme. Hence dropsy always suggests the idea of an incurable organic disease; hæmoptysis that of pulmonary tubercle. Sufficient attention is not paid to the *experientia fallax* of which Hippocrates speaks, and which is specially applicable to diagnosis. All cases of sub-acute peritonitis are not tubercular; there are rheumatic cases —rare, it is true, in adults, but more common in children.

The calomel and the hemlock cataplasms have an absorbent and resolvent effect, even in ascites connected with organic lesion. There was lately a little girl in M. Trousseau's wards, who had had ascites for three months. Nothing abnormal was observed in the heart or liver; but there was reason to suspect the existence of mesenteric tubercles. M. Trousseau prescribed calomel. Salivation took place on the eighth day, and he then applied the hemlock poultices. After fifteen days of this treatment, the fluid was absorbed; and there was felt, in the left flank, a nodulated irregular tumour, of the size of a pigeon's egg, and probably tubercular. The treatment was of no avail against this affection; but it removed the complication, and this is a great step. [*Journal des Connaissances Médico-Chirurg.*, 16 March, 1851.]

MISTAKEN SEX FROM CLOSURE OF THE VAGINA, AND HYPERTROPHY OF THE CLITORIS.

In September, 1850, Dr. Haskins, of Richmond City, U.S., examined, by request, a slave belonging to a gentleman in Mecklenburg County, Virginia, who had been reported as "A Curious Case of Hermaphrodism", by Dr. S. H. Harris, in a communication made to the twenty-seventh number of the *American Journal of Medical Sciences.*

The following is an abridgment of Dr. Haskins' paper as published in the *Stethoscope*:—

I must say, in justice to Dr. Harris, that the examination which I was enabled to make was much more satisfactory than the one from which he made the report. His having been made at a time when he did not expect it, he was unprepared with instruments to assist him, and had also to contend with the reluctance which is usually manifested by such persons to have their real situation known.

Her appearance is that of a woman dressed in man's apparel. Her stature is low, frame delicate, hips broad, lower extremities bent or inclined inwards at the knee-joints, making her *knock-kneed*, gait shuffling, instead of the firm, strong, elastic step of manhood, the face is perfectly smooth, exhibiting no trace of beard, although she is now twenty-one years old. The mammæ although not exhibiting the plumpness of virginity, are as well developed as you ordinarily see them. The *mons veneris* is prominent and well developed, being covered with hair as in the female, and immediately over the symphysis pubis in situated an organ which resembles almost exactly a dwarfish penis. It is about an inch long, and half an inch in diameter, terminated by a tubercle corresponding in shape and appearance with the *glans penis*. There also appears to be the orifice of an urethral canal, properly located in the glans, but upon closer examination it proves to be the terminus of a fissure situated on the inferior surface of the organ, formed by the approximation of the edges of what appears to be the nymphæ, which had adhered to, and were stretched over it, so as partly to contribute to the formation of a preputial covering. The prepuce consisted of that portion of the labia majora which was separated by the root of the organ, as well as the lower portion of the mons veneris. I introduced a silver probe along the fissure before alluded to, to the distance of about an inch, where the fissure terminated by the apparent union of its lips, forming a cicatrix, which resembled somewhat the raphe of a scrotum. This raphe extended to what should have been the position of the posterior commissure of the vulva in the female. I found the orifice of the urethra near this place; and introduced a female catheter into the bladder, when there escaped through it about a teacupful of urine. Withdrawing the catheter and inserting it again, at a point a few lines below the orifice of the urethra, I gave it a direction downwards, instead of that of the urethral canal, and found no difficulty in inserting it its whole length into a cavity where its point could be freely moved in any direction. On taking it out, the lower portion was filled with a dark-coloured fluid resembling blood—the menstrual fluid which had there accumulated. The lower portion of the labia externa presented a rugose, flabby appearance, and with the raphe dividing them, resembled very much a scrotum deprived of testicles. This condition of the labia was doubtless produced by the collection behind them of the fluids escaping from the womb, causing them to act temporarily as the outer walls of a sac containing fluid, the pressure of which varied with the position of the body. I learned from the individual that the escape of fluid from the vagina was irregular, and depended upon the attitude of the body, the only outlet being the small orifice just beneath the urethral opening. There were, however, periodical returns of all those symptoms which accompany menstruation, and so marked as to have attracted the attention of the elder female servants. I also learned that the organ was subject to erections; and that she had desires for the female sex, but had been deterred from attempting connection by an apprehension that her deformity would be discovered.

Thus it appears that this "curious case of hermaphrodism" has been proved to be a case of occlusion of the vagina, accompanied with hypertrophy of the clitoris.

An operation was proposed; but when I stated that it would entirely change the assumed sex, she opposed it with so much earnestness that it was not insisted upon. [*The Stethoscope.*]

SURGERY.

PROFESSOR SYME'S OPERATION FOR TREATMENT OF STRICTURE OF THE URETHRA BY EXTERNAL OR PERINEAL INCISION.

The Treatment of Stricture of the Urethra, by external incision, as advocated by PROFESSOR SYME, of Edinburgh, in his pamphlet published in 1849, has called forth the controversial energies of zealous partizans and opponents. In the various communications on the subject, which have appeared in the medical journals, there is much that will repay perusal. The following are the articles most likely to prove interesting :—

SYME, Professor, *Lancet*, Feb. 17, 1849 ; April 20, 1850 ; May 18, 1850. (The latter article contains Mr. Syme's challenge to the London surgeons to send him a case of *impermeable* stricture.) Cases in *Lancet*, January 25 and Feb. 15, 1851. Mr. Syme's views were fully laid before the readers of the LONDON JOURNAL OF MEDICINE, p. 35, vol. for 1850.

FERGUSSON, Professor, Case with Lithotomy. *Lancet*, Feb. 16, 1850, and May 11, 1850.

SMITH, Mr. Henry. *Medical Times*, Sept. 15, 1849, May 4 and 25, and June 1, 1850.

PARTRIDGE, Professor. *Lancet*, April 13, 1850.

COCK, Mr. Edward. *Lancet*, June 29, 1850.

WADE, Mr. Robert. *Lancet*, January 26, 1850.

LIZARS, Mr. John. Cases Illustrating the Failure of the Operation for Perineal Section. *Medical Times*, October 26, 1850.

PROFESSOR MILLER has published in the *Lancet* for March 22, 1851, a paper lately read by him before the Medico-Chirurgical Society of Edinburgh. It is an excellent essay ; and contains a fair summary of the arguments for and against Mr. Syme's operation. As Professor Miller has disentangled the subject from many offensive personalities, with which others had overlaid it, we hope in future to see it properly discussed.

The author commences by referring to the fact, that perineal incision had long been practised and recommended by the late Sir Everard Home, by Sir B. Brodie, Dr. Jameson of Baltimore, the late Mr. Liston, and other eminent surgeons. He quotes passages from their writings to shew that this opera- "has not wanted the sanction of good surgeons. At the same time, it is worthy of note, that the operation is spoken of as sometimes difficult, by no means free of danger, and not warrantable unless the other and more ordinary means of cure have been tried, and found ineffectual." Mr. Miller has himself had occasion to resort to this procedure in two cases ; in one, the patient died, on the nineteenth day after the operation, of pyæmia, which was at the time prevalent in his wards ; in the other, the patient recovered.

He then proceeds to discuss the peculiarities in the modification of the operation lately proposed and practised by Mr. Syme. These are twofold :— 1. "An instrument is passed through the stricture, on the groove of which instrument, as a director, the stricture is divided. 2. The operation is *extended* to other cases than those which have actually proved intractable by other and gentler means ; rating the operation as one of *expediency*, in some measure, rather than of absolute *necessity*."

The first-mentioned peculiarity implies that *all strictures are permeable*, not only to urine outwards, but also to an instrument inwards. Mr. Miller observes, that most authorities agree that actually impermeable strictures are very few ; but that there is indisputable evidence of their occasional occurrence, as appears from the writings of Sir C. Bell, Mr. Liston, Baron Dupuytren, and Mr. Syme himself ; who, in the *Monthly Journal of Medical*

Science for 1844, published some cases of stricture, in one of which he mentioned, that "the smallest probe could not be passed". Having thus established the fact of the occasional occurrence of impermeable stricture, Mr. Miller makes the following judicious remarks :—

"The term 'impermeable stricture' seems to be an equivocal one. No stricture need be impermeable ; all may be forced, but with the risk of a false passage, and serious risks ensuing. A provincial surgeon, of great experience, used to boast that no strangulated hernia had ever resisted his hands ; with him the taxis never failed ; all cases were, to him, reducible. But such was dangerous practice ; and it seems to me that a similar risk must attach to the maxim, "all strictures are permeable". The student and young practitioner may be taught, that to fail with the instrument must always be a sign of deficient dexterity ; and, in consequence, they may be tempted to such a rashness of procedure as has been well deprecated by Sir Charles Bell. (*Surgical Observations*, p. 57.)[1] . . . Besides, a stricture which is at one time impermeable may, by spontaneous change, irrespective of all treatment, become permeable. An example of this is afforded by Mr. Syme, when he says that a case of stricture, which had been under the care of Mr. Liston, in the North London Hospital, and had obstinately refused to yield to that surgeon's efforts to pass an instrument, afterwards came under his own care in the same charity : and that he succeeded in passing an instrument into the bladder. Putting the manual dexterity, tact, experience, and general accomplishment of Mr. Liston and Mr. Syme on the same level,—an arrangement to which the latter gentleman will not object,—it follows that the stricture, at one time impermeable, at another time had ceased to be so, independently of curative treatment.

"On this part of the subject my belief is, that some few strictures there may and will be found, which are not, or ought not to be, permeable ; and that in these, rather than encounter risk by forcible propulsion of the instrument, it were better to perform the old operation."

With regard to Mr. Syme's extension of the operation of perineal section, Mr. Miller remarks that it is warrantable in such permeable examples only on two grounds ; first, that the cure will thus be rendered more rapid and certain than by other means ; secondly, that the plan of procedure is equally safe.

Mr. Syme's plan, the author thinks, is undoubtedly more rapid, but not more certain, in most cases of permeable stricture, than the rightly conducted treatment by instrumentation. Here he calls attention to two modes of using the catheter and bougie, well adapted to the final subjugation of cases even of great obstinacy ; viz. (*a*), the method of *tunneling*, as it may be called, by which the stricture is gradually penetrated by successive introductions of a No. 5, 6, or 7 bougie, made somewhat conical at the extremity, and allowed to remain for a longer or shorter time, according to the feelings of the patient ; and (*b*) tying in the catheter for forty-eight hours or thereabouts, a method well suited to gristly and resilient stricture : on withdrawing the catheter, a bougie of medium size may usually be introduced with comparative ease, and dilatation may be proceeded with. If it be objected that the tying in of the catheter is an irksome and formidable proceeding, the answer is obvious,—that no more is done, in this respect, than what is practised after perineal section ; and surely retention of the catheter for forty-eight hours is less formidable without than with a perineal wound.

In reply to the objection that "strictures so treated are prone to relapse", Professor Miller makes the following pertinent remarks. "In almost all cases, such relapse is not the fault either of the surgeon or of his system of

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[1] "Of course I do not mean to infer that Mr. Syme practises the forcing of strictures, but only to express my fear that the unqualified enunciation of the maxim, 'all strictures are permeable', may lead the younger members of the profession to this procedure."

treatment, but of the patient himself. After having obtained half a cure, he grows irregular in his attendance, resumes careless living, perhaps lapses into dissipation, and does not return to regular treatment until recontraction of the urethra has warned him of his folly and risk. But let the dilatation be completed, till a full-sized instrument has on many occasions passed the whole canal unopposed; then let occasional introductions be maintained at gradually lengthening intervals, at the same time the general health, and especially the function of the kidneys, being carefully attended to;[1] and I believe that, under these circumstances, tendency to unusual resiliency and relapse will be sought for in vain. In other words, I believe that, in most cases of stricture, as perfect and permanent a cure may be obtained in this way as by any other means of treatment, however heroic that may appear."

As to the *safety* of the operation, Mr. Miller does not question that it has been safe in Mr. Syme's experience, but observes that "fatal results *have* occurred in other hands, both in London and Edinburgh. And it is not easy to see how a certain amount of risk can be avoided in such an operation. 1. By hæmorrhage. No doubt the safety here is to cut in the centre, and only in the condensed and solidified tissues which compose the stricture. 2. By urinary infiltration; and we know that very little of this may prove fatal, the urine acting as an intense poison on the system. 3. By abscess in or near the wound, leading perhaps to fistula, and irritative or hectic fever ensuing. 4. By intra-pelvic abscess. 5. By erysipelas. 6. By pyæmia."

The following are the general conclusions drawn by Professor Miller:—

"1. Most strictures are permeable; the great majority of these are curable by other and safer means than perineal section; and the metallic bougie and catheter, when rightly used, are neither so injurious nor so inefficient as Mr. Syme has represented them to be. 2. Permeable strictures, which refuse to yield to cautious and correct instrumentation, combined with suitable general treatment—strictures, also, which yield in part, but speedily and pertinaciously relapse—and strictures which are so impracticably irritable as absolutely to interdict the use of instruments, even with the aid of chloroform, opium, Indian hemp, nitrate of silver, etc.—such strictures may and ought to be treated by perineal incision, after the manner of Mr. Syme; *but such strictures are very few.* I may add, that strictures which, though bad, do not yet come altogether within the preceding category, may be subjected to perineal incision, when *time* happens to be an element of great importance; where the patient, for example, is a labouring man, and anxious to be as short a time as possible laid aside from the maintenance of his family. 3. Those strictures which are impermeable,

[1] "Mere handiwork will not succeed in stricture any better than in other complaints. There is no "*pure* surgery"; at least there ought not to be. The department of the surgeon is medico-chirurgical, not simply chirurgical; and every practitioner knows, that in no class of diseases is the aid of *medical* science more valuable, and indeed essential, than in those of the urinary organs. Many strictures may be prevented, and some may be cured, by medical treatment alone. And I have a dread of the terms "pure surgeon" and "pure surgery", as operating on the mind of the student; leading him, it may be, to neglect or despise that part of his professional accomplishment, without which he were but a fit representative of the barber-surgeon of a less enlightened day." [We are heartily glad to find so eminent a surgeon as Professor Miller thus strongly opposing the absurd idea, that there can be such a being as a "pure surgeon", or such a thing as "pure surgery". As the improvement of our profession advances, the day will probably arrive, when a "pure surgeon" will be thought of as an almost fabulous monster of antiquity; but, in the mean time, we must, with Mr. Miller, protest against the use of such terms, as they are liable to mislead the student, and cause him to neglect opportunities of acquiring indispensable knowledge, which can never be regained. EDITORS OF LOND. J. OF MED.]

or ought to be considered such—and they may be expected to prove still fewer—should be treated by perineal section after the old method."

As to Mr. Syme's monograph, Mr. Miller observes :—

"1. That, while he has overstated the risk attendant on the use of the metallic bougie and catheter in the treatment of stricture, he has underrated their efficiency. 2. That the operation proposed by him is admirably adapted for certain specified cases ; few in number. 3. That it is not applicable to all cases intractable by other means ; there being some strictures which are actually, or which should be considered to be, impermeable. 4. That the operation is not devoid of danger. 5. That progress towards cure thereby is not always smooth and uninterrupted. 6. That the operation will be found not always, and probably not often, sufficient of itself to cure. 7. That subsequently to the operation, instrumentation is required in the usual way ; the main use of the incision being, besides diminution of morbid irritability, to give the practitioner a good *start* in the use of the bougie, as after tying in a catheter. 8. When cure is completed, by instrumentation following on incision, dilatation may be expected to prove permanent ; inasmuch as such cure may not depend on mere expansion of the primal canal, but on something like reproduction of a portion of the urethra at the enlarged part..... The ordinary tissues at the part may be condensed, changed, and invested by a membranous lining, so as to cure the constriction by not merely dilating the old canal, but by *patching*, or *letting in* a new portion. Towards this end, however, it is very obvious that the use of the bougie, subsequently to the operation, is quite esssential.

"Or, further to condense, I believe :—1. That Mr. Syme's operation is a good operation, and an important addition to operative surgery, applicable to certain bad, very bad, strictures, which, however, are likely to prove, in the hand of a surgeon who practises all the departments of his art, and practises them all well, extremely few. 2. That those bad strictures, which are still worse, being impermeable, should be cut in the old way, and that such strictures are likely to prove still fewer. 3. That all other strictures—and these constitute a vast and overwhelming majority of all strictures—should be treated by instrumentation (catheter or bougie) variously employed, without incision."

MR. JOHN WALKER ON THE TREATMENT OF STRICTURES BY CAUSTIC POTASH.

The *Edinburgh Medical and Surgical Journal* for April 1851 contains a memoir, by Mr. W. Brown, of the late Mr. John Walker of Edinburgh ; from which we copy the following extract of a letter by Mr. Walker, relating to the use of Caustic Potash in Stricture. The date of the letter is 19th Feb. 1824.

".... The caustic used is potassa, which should be as perfect and uninjured as possible by the air's action. It must be reduced to fine powder in a small china mortar. To this add from a third to two-thirds of Spanish soap, also in powder. After incorporating them, a little soft water must be cautiously and gradually added, till it gets to the consistence of a paste or soft mass for pills ; it must then be put into a small wide-mouthed phial, firmly corked or stopped. I sometimes add a small quantity of very pure and finely-powdered opium, previously rubbing it with the soap ; but whether with any advantage, I cannot say. It will be well not to prepare much of the paste at once. I seldom prepare above a drachm or a drachm and a half at one time.

"In using it, take a small portion out with a silver knife or probe, and put it upon a bit of soft leather, which rub upon the holes of the instrument, till they are filled. Then wipe it clean with a soft rag, that the paste may be nowhere but in the holes. It must then be oiled, and introduced, with as much quickness as the feelings of the patient will permit, down to the

stricture, which you must now *enter;* and, after remaining a few seconds within it, move gently backwards and forwards three or four times, taking care not to go, if possible, beyond the limits of the stricture. After withdrawing it, I sometimes used to inject a syringe-full of warm oil, which soothes the parts; and generally give an opiate, which is preferable *per anum*, by means of a small one-ounce syringe, which will convey one ounce of mucilage, and 40 or 80 drops of laudanum, with great ease.

"Before introducing the caustic instrument, it will be proper to pass a full-sized common or silver bougie down to the stricture, but not to pass it. This widens the passages, removes spasm, and facilitates the introduction of the other.

"Should much pain, irritation, or suppression, take place from the use of the caustic, I need not say fomentations to the perinæum, and opiate clysters, will be required, with camphor mixture, three or four times a day.

"The slough produced by this caustic is quite different from that by the nitrate of silver. The latter is a tough tubular membrane; while by *this* it is gelatinous and bloody, as it acts at once, and dissolves the stricture, particularly if it is spongy and tender; of which we can readily judge by the feel in passing, by its bleeding readily, and by its being accompanied by a puriform discharge. When it is in this state, the potash acts powerfully, and brings away a great deal of gelatinous brownish slough.

"After the lapse of a few days, it may be well to examine the stricture by the bougie, so as to ascertain if you have gained ground, and determine both the propriety of another application, and the size of the instrument to be employed; because a single application may have been sufficient to put the stricture in a state to be afterwards managed by the bougie. At the same time, as this mode requires the instrument to be firmly grasped by the stricture, in order to its effectual action, we must enlarge the instrument as we gain upon the stricture; but we must also guard against undue irritation from the too frequent or too severe application of the caustic, and use as little of it as we can, till we know more of our patient, and what he can bear. Indeed, at all times, as a general maxim, I would say, never use the caustic when you can do your purpose by the bougie, though I know most strictures of long standing will not do without a few applications of the caustic; then the bougie acts with the utmost advantage, after the diseased surface is removed, which is the business of the caustic, not of the catheter.

"I have often been surprised at the effects of a single application of caustic, when I have not had an opportunity of examining the patient for two or three weeks after it has been used, and when, therefore, all irritation and swelling have left the parts. This should lead us not to be too hurried in renewing our applications; for, till the swelling subsides, we never can know what we have gained, and we had better act with caution. Though some recover much sooner than others, I should say a week is the usual time.

"I do not think the caustic acts so readily upon healthy parts as the nitrate of silver. If, after one or two applications, therefore, you find the instrument, when withdrawn, clean and without slough, I should be disposed to consider the parts much improved, and perhaps not requiring the use of more caustic.

"After withdrawing the instrument, it should be cleansed from slough, as well as caustic, by dipping it in hot water, and, with a bit of pointed wood, or tooth of a comb, cleaning the holes; and this will be completed by the aid of a brush, so as to remove all remains of caustic. The instruments are covered with leather slips, which I have used for many years. Too great attention cannot be given to preserve the polish of the instrument; the slightest touch is like a file to the delicate membrane."

[Mr. John Walker was a Fellow of the Royal College of Surgeons in Edinburgh, and was long a well-known practitioner in that city. He was

born in 1776, and was the son of Dr. John Walker, who was for several years Treasurer of the Royal College of Surgeons. After attending the lectures at the University of Edinburgh, and the practice of the Royal Infirmary and the Public Dispensary, he repaired to London in 1787. While there, he became a pupil of Cruickshanks, and subsequently of John Hunter. Of the latter he speaks, in his letters to his father, in terms of admiration; but with regard to the other lecturers, he appears to have been greatly disappointed, regarding the demonstrations of Mr. Cruickshanks as being "very confused, dry, and unmethodical, and far inferior to those of Monro". Mr. Walker was made a Fellow of the Royal College of Surgeons in Edinburgh, 15th September 1791. After practising in that city for many years, he died at Moffat in 1841, having for several years retired from the active duties of his profession.]

WILMOT ON STRUMOUS URETHRITIS.

In an instructive essay on some Affections of the Male Urethra, published in the *Dublin Quarterly Journal of Medical Science* for February 1851, Dr. S. G. Wilmot calls attention to a disease to which he gives the name of Strumous Urethritis. The symptoms are a constant discharge of watery matter, resembling whey, from the urethra, and a tickling or hot sensation in passing urine. These symptoms are heightened by drinking spirits, by sexual intercourse, or by exposure to wet, cold, and fatigue; and frequently an attack resembling acute gonorrhœa supervenes without any assignable cause. The lips of the urethra have a pouting appearance; they are not, however, circular as in gonorrhœa, but appear flattened laterally. The mucous membrane, as far as can be seen, resembles very closely the state of the palpebral conjunctiva in granular ophthalmia; and Dr. Wilmot believes that this condition extends as far as the bulb. On introducing a No. 8 bougie or catheter, pain is felt all along the passage, but especially at the bulb, where there is generally a soft spongy obstruction, capable of being surmounted by a little pressure on the instrument.

Dr. Wilmot looks on this affection as essentially strumous: and in a case which he recently had under his care, the patient had also strumous disease of both testicles. The disease, though independent of gonorrhœa as its cause, is very frequently preceded by that specific complaint, which glides gradually into it through the medium of gleet. A case of protracted gleet, in a person of well-marked strumous disposition, may therefore be expected to merge into the slow and obstinate disease just described.

When the disease is allowed to progress, the bladder very frequently becomes engaged; its irritability becomes increased, and there is a large deposit of pus in the urine. Dr. Wilmot has not had an opportunity of ascertaining whether the mucous membrane of the bladder presents the granular appearance; but he thinks it a rational conjecture that such is the case.

The urine is generally neutral; often slightly acid, and sometimes faintly alkaline: pus-globules are always detected by the microscope. It is often slightly albuminous; but it is difficult to determine whether this is from pus, or from the kidneys. Dr. Wilmot believes, that patients who have been long tormented with strumous urethritis ultimately die of renal disease.

In the treatment, Dr. Wilmot recommends the occasional introduction of a bougie, smeared, if there be not too much irritation, with some astringent ointment, especially the acetate of lead ointment. We may also employ injections of zinc, alum, or copper, or nitrate of silver; but Dr. Wilmot prefers the decoction of oak-bark, either plain, or with two grains of alum to the ounce. A little opium may be added, if there be pain or much irritation.

For the constitutional treatment, it is well to administer at first Plummer's pill and the iodide of mercury in small doses: but should the patient exhibit very marked scrofulous features, iodide of iron should be at once given.

Either of these medicines should be combined with extract of hemlock. Two grains of iodide of iron, and the same quantity of extract of hemlock, given three times daily for some time, have proved very beneficial. Nitro-muriatic acid may afterwards be given in decoction of bark or sarsaparilla. Sea-bathing, if the patient's health admit of it, should be regularly observed, and a generous system of diet ordered: ardent spirits, sexual connexion, over-exercise, and any other thing which increases the irritation, should be sedulously avoided. Where balsams and turpentine are persevered in, with the vain belief that the case is one of common gleet, the symptoms never fail to be aggravated.

NOCTURNAL ENURESIS TREATED BY APPLICATION OF NITRATE OF SILVER TO THE NECK OF THE BLADDER.

Dr. Demeaux has related, in the *Gazette des Hôpitaux*, some cases of nocturnal incontinence of urine occurring in adults, which he has successfully treated by one or more applications of nitrate of silver to the neck of the bladder. This remedy is probably very advantageous in incontinence of urine in puberty or adult age, for the affection is then of long standing and obstinate. But it would be barbarous to have recourse to this treatment in children, for whom belladonna is generally sufficient.[1] If this fail, we can still cauterise the urinary meatus, before proceeding to the operation on the neck of the bladder, which is not unattended with pain. [*Journal des Connaissances Médico-Chirurg.*, 1st March 1851.]

OBSTETRICS.

PROFESSOR SIMPSON ON REFLEX SENSATIONS CONNECTED WITH UTERINE DISEASE.

We quote, with slight abridgement, the following very lucid and instructive explanation of the so-called Sympathetic Pains which attend Uterine Diseases, from a clinical lecture by Professor Simpson in the *Edinburgh Monthly Journal* for February 1851.

The various pelvic symptoms (pains, difficult defecation or micturition, etc.) are, in some instances, mechanical in their pathology; in other instances they are sympathetic results. They may be present, and strongly marked, when the uterus is not unnatural in size or in position. In these instances (perhaps the more numerous class) we speak of the resulting disturbances of function, and increased sensations, as sympathetic or reflex; that is, as originating in an irritation primarily seated in the uterus and uterine nerves, but terminating and felt, secondarily, in the sensitive nerves of those other neighbouring parts which are affected.

In diseases of the uterus and its appendages, the principal pains and sufferings are often not located in the uterus or pelvis, but in other parts of the body, forming an important series of dynamic symptoms.

Sympathetic Pains in Different and Distant Parts of the Body. These sympathetic pains, or neuralgiæ, are often so marked as to draw away the attention of the patient, and even of the practitioner, from the real nature and seat of the malady.

Reflex motions are excited by excitation upon distant mucous and cutaneous surfaces, the impressions being conveyed by a nervous arc (which always passes through the spinal cord) to those muscles which are ultimately set into contraction; and these muscles may be situated in remote parts of the body. Morbid sensations, Dr. Simpson believes, originate often in the

[1] See London Journal of Medicine, January 1849,

same way; and we can as truly speak of reflex sensations as of reflex motions. A severe pain in the knee-joint frequently accompanies the early stage of morbus coxarius; and this pain cannot be explained on any mechanical principle, or by reference to any swelling in or around the diseased joint, compressing the nerves which supply the knee. The sympathetic or reflex pain occurs most generally in the commencement of the disease, when the lining membrane merely of the hip-joint is as yet affected, and when there is little or no swelling or effusion. An impression or excitation is conveyed from this affected membrane by the nerves which are distributed to it, and this impression is probably conveyed by them upwards as high as the spinal cord; and then another impression would seem to be reflected or conveyed downwards from the cord along another set of nerves,—viz., along the branches of those which are ultimately distributed to the knee-joint, the immediate seat of the so-called sympathetic pain. Or we may state the matter more correctly, by saying that the trunk of the nerve, going to the knee, has a morbid sensitive impression made on it somewhere during its course, as it passes through one of its higher plexuses, or at its origin in the cord itself, producing a change in it as if its own branches in the knee were painfully affected. Irritation of the mucous membrane of the bladder often gives rise to sympathetic or reflex pains in the orifice of the urethra, and along the course of the lower extremities. The small, red, granular, and very painful sensitive tumour, which sometimes grows at the orifice of the female urethra, is occasionally accompanied with distressing pain in the heel and sole of the foot. When the uterus is distended and irritated in pregnancy, the patient often complains of reflex or sympathetic pains in the lumbar region, in the mammæ, in the nerves of the teeth, etc. When the uterus is the seat of actual disease, such reflex pains are often very marked, and, at the same time, they are apt to deceive and mask the original and primary disease. The dependence of the reflex or sympathetic pains in uterine diseases upon the uterine irritation itself, as their primary source, is best seen in cases of displacement. By restoring a displaced uterus to its natural position, even though only temporarily, the attendant sympathetic effects are generally moderated or entirely removed. We cannot have the same precise proof in other uterine diseases, as ulcer, cancer, etc., because we cannot at once remove the primary irritation.

The following are the principal sympathetic pains under which patients, suffering from uterine disease, are liable to complain. They are enumerated, as far as possible, in the order of their frequency.

Pain in one or both Mammæ is very common in many forms of uterine irritation. It is often accompanied by some degree of swelling or tension in the gland; and occasionally the areola becomes somewhat darker and changed, as in pregnancy. These symptoms are particularly liable to be increased at the period of menstruation. If a patient complain of pain in the mamma, without evident local affection, the inquiry should always be directed to ascertain whether some diseased action is not going on in the uterus.

Pain under the Left Mamma, and upon the edges of the ribs of that side, is also very frequent, perhaps even more so than pain in the mamma itself. Dr. Simpson is inclined to believe it more common in uterine or ovarian disease in the unmarried, than in the married. It is probably as frequent in cases of uterine affections, as pain in the shoulder is in cases of hepatic affections. This pain under the left mamma is sometimes diffused along the side, but more usually it is limited, and the patient will say that she thinks she could cover the whole of the pained spot with a crown-piece. When not severe, it is not affected by respiration; but in more severe cases, it is increased by deep inspiration; and many a patient has been bled and leeched, etc., over and over again, under the idea that the pain was an indication of pleuritic inflammation, when, in fact, it had nothing to do with pleurisy, or any disease of the chest.

Pains in the Right Side, or right hypochondriac region, are much more rare, but are still sometimes to be met with.

Pain in some of the Vertebræ, imitating spinal irritation, is often also an accompaniment of uterine inflammation, and is not unfrequently combined with the pain under the left mamma. The patient principally complains of it when the part is pressed. Many suffering from these sympathetic vertebral pains, in consequence of uterine derangement or disease, have been laid up and counter-irritated with the moxa, cautery, etc., under the idea that there was actual spinal disease present.

Pain in the Lumbar Region, or in the Lumbar and Sacral Regions combined, is especially common as a sympathetic morbid sensation in uterine diseases, but particularly in those which consist of any displacement or enlargement of the organ. The great sacro-lumbar pain, which the woman in labour suffers in the same part, is itself entirely a reflex or sympathetic pain of the same character.

Pains in the Abdominal Parietes occasionally occur. Sometimes they are limited to one side, occupying the site of the ascending or of the descending colon. Occasionally they are confined to a limited spot. But, in other instances, the whole surface of the abdominal walls is tender and neuralgic. When this is the case, there is often also a greater or less degree of tympanitis, so as to suggest the presence of acute peritonitis, or of serious enlargement and organic disease of some abdominal organ. In some cases, the apparent tenderness is so great that the patient timidly shrinks under the least touch, and is even terrified at the approach and pressure of the hand of the practitioner.

Pains in the Extremities and Joints are sometimes secondary morbid results when the primary irritation or disease is seated in the uterus. Pain, stretching from the loins or pelvis downwards, along one or both of the lower extremities, is a very common symptom in uterine disease. In ovarian enlargement there is sometimes (particularly in the earlier stages of the disease) a morbid sensation of numbness and pricking in the corresponding limb ; but this effect is probably mechanical, the consequence of pressure upon the nerves of the limb. Under the name of hysterical knee-joint, surgical authors describe a painful affection of that part, occasionally accompanied by swelling and apparent effusion, and which has often been mistaken for the common white-swelling. The pain, and other symptoms, are so chronic and so marked, as sometimes to have led the surgeon to amputate the limb for supposed incurable disease of the joint. Dr. Simpson is well assured, that in these cases the pain in the knee is almost always a secondary or reflex pain ; and that the primary source of irritation will be found in some distant organ—very often, indeed, in the uterus or ovary. Similar pains in the other joints of the extremities are rarer, but are not altogether unknown. Dr. Simpson has had a patient suffering under chronic inflammatory ulceration of the cervix uteri, with profuse purulent discharge, and much pain and tenderness in the vaginal canal. But there was still more severe pain and tenderness of the skin and tissues over the head of the right radius. It sometimes deprived the patient of rest ; and she maintained that it decreased and increased in correspondence with the changing state of the uterine irritation and discharge.

Pains in the face and head may also occur. Toothache, as a sympathetic pain, occasionally occurs during pregnancy ; but Dr. Simpson has not had occasion to trace its connexion with uterine disease. Local and limited pains, as over one or the other eyebrow, in the forehead, in the occiput, in the temple (*clavus hystericus*), etc., sometimes appear to be the secondary consequences of uterine irritation. The headaches, however, under which uterine patients often suffer, are more frequently results of anæmia or functional derangement than of reflex or sympathetic sensation.

[The doctrine of *reflex sensations*, (so clearly expressed and illustrated in

the above,) is thus enunciated by Dr. C. J. B. Williams, in his *Principles of Medicine*, 2nd edition, p. 98, London: 1848:—

"Clinical observation teaches us that not merely motory impressions, but also those which cause sensations, may be reflected, so that when the impression is made on one part, the sensation is experienced in another. I do not allude to the fact that a stroke on the nervous trunk produces feelings referred to its branches, but I advert to impressions on the ultimate distribution of one nerve producing sensations in parts supplied by another nerve, or by another branch of the same nerve. . . The sensations cannot be referred to direct nervous communication, but to an influence reflected, probably from the spinal centre only."]

PLACENTA ADHERENT TO THE SCALP OF A MALFORMED FŒTUS.

Dr. Fletcher described this case, and exhibited the fœtus to the Birmingham Pathological Society. It is detailed in their *Ninth Report*, p. 33. The placenta adhered to the scalp, by a large portion of its membranous surface. The frontal and parietal bones were absent; the brain and membranes were healthy, and not unnaturally connected with the scalp. The nasal bones were absent; the alæ nasi separated for half an inch; the left nostril was open to the head. The left eye was small; the palpebral opening only three-eighths of an inch long; the right eye so small as to be hardly felt; the palpebral opening was obliterated. The upper lip was cleft. The left toes and fingers were defective. The age of the fœtus was eight months.

PLACENTA ATROPHIED AND CONTAINING CLOTS, IN A CASE OF ABORTION.

A healthy young woman, the mother of five children, who had never before aborted, aborted at the seventh month, six weeks after receiving a slight injury in the abdomen. Mr. Bindley exhibited the placenta to the Pathological Society of Birmingham; and in their *Ninth Report*, p. 36, it is thus described. "It was irregularly lobulated; one of the lobes contained a large coagulum; another portion was doughy and contained blood extravasated into its vascular network, which was degenerated into a pulpy mass. The whole organ was atrophied. The funis was thin; the vessels pervious."

MATERIA MEDICA AND PHARMACY.

TURPENTINE CONFECTION: COOKE'S FORMULA.

A Transatlantic cotemporary, the *Western Journal of Medicine and Surgery*, says that the following paste or confection, as prescribed by Professor F. E. Cooke, often succeeds as a diuretic when all others fail. "It is also very useful in diseases in which the mucous membrane is involved. There is a species of hoarseness which follows inflammatory affections, and which often approaches aphonia, in which this paste is a very valuable remedy." The following is the formula:—Castile soap, ℥iv; spermaceti, ʒviij; Venice turpentine, ʒvj; oil of aniseed, ʒiij; turmeric, ʒij; honey, q. s. Rub the soap and spermaceti well together, add the turmeric; after rubbing them well together, add the turpentine and oil of aniseed; and then sweeten with the honey. *Dose.* A piece the size of a nutmeg is given two or three times a day.

SEED OF THE WATER-MELON (CUCUMIS MELO).

Dr. Hook of St. Matthew's, South Carolina (U. S.), bears strong testimony to the value of the seed of the water-melon as a diuretic. He recommends that two ounces of the seed be bruised, and a pint of boiling water poured upon them. Three or four ounces prove diuretic and demulcent. (*Boston Med. and Surg. Journal*, from *Charleston Med. Journal.*)

THE HOSPITALS OF LONDON. No. V.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

LONDON HOSPITAL.

PHYSICIANS. Dr. F. Cobb, Dr. A. Frampton, Dr. W. J. Little.

ASSISTANT-PHYSICIANS. Dr. Jonathan Pereira, Dr. P. Fraser, Dr. Herbert Davies.

SURGEONS. James Luke, Esq.; John Adams, Esq.; T. B. Curling, Esq.

ASSISTANT-SURGEONS. G. Critchett, Esq.; N. Ward, Esq.; J. C. Wordsworth, Esq.

THE LONDON HOSPITAL, which now stands in the Whitechapel Road, was originally opened under the title of the "London Infirmary", in the City Road, on November 3, 1740; but was removed to Prescot Street, Goodman's Fields, in the following April. The sphere of its operations having rapidly increased, the name of the institution was changed seven years after to that of the "London Hospital"; and, in 1752, the foundation of the present building was laid by Admiral Sir Peter Warren, Bart. In the beginning of 1758, it was opened for the reception of patients; and on the 9th December in the same year, the governors received a charter of incorporation from his Majesty George the Second.

This Hospital is situated nearly in the centre of the Tower Hamlets, a borough containing a population of about 400,000, and is in the vicinity of the Docks and some of the most important and extensive manufactories of the metropolis. From this circumstance it arises, that a large proportion of the cases which come under treatment are *accidents;* the docks giving, on an average, one accident a day. The London Hospital may therefore be considered as the great *surgical* hospital of the metropolis. It contains four hundred beds, which are thus classified, viz.:—

Male Accidents	130
Do. Surgical cases, not being accidents	40
Do. Medical cases	63
Female Accidents	35
Do. Surgical cases, not being accidents	33
Do. Medical cases	44
Hebrew Wards (Male)	11
Do. Do. (Female)	10
Children under seven years	20
Attics—for cases of Fever or Delirium tremens	6
Operation Wards (Male)	4
Do. Do. (Female)	2
Extra Do. for Male or Female as required	2
	400

Owing to the large proportion of accident cases received, the number of patients under treatment in the house at one time varies very considerably, it having ranged in one year from 253 to 396. During the year 1850, the average number of patients in the house was 320.

The following is a table of the number of accidents admitted during the years 1842—50, both inclusive.

Years.	Fractures.	Wounds.	Contusions.	Sprains.	Dislocations	Concussions.	Burns and Scalds.	Hernia.	Bites of Dogs.	Suicidal attempts and Poisoning.	Various.	Totals.
1842	840	1042	2141	567	97	52	265	75	58	38	328	5503
1843	899	1036	2122	592	111	48	327	65	52	46	368	5666
1844	1003	1344	2243	660	86	46	322	52	43	36	266	6102
1845	952	1361	2681	663	108	32	360	46	51	32	269	6555
1846	954	1384	3092	624	119	44	423	63	52	30	234	7019
1847	1052	1879	3362	847	110	51	462	76	64	18	356	8277
1848	1003	2562	3529	875	121	45	422	89	92	41	237	9016
1849	1050	2413	2975	892	103	72	426	68	99	30	883	9011
1850	1084	2598	3444	1040	112	39	429	65	101	25	262	9199
Total	8837	15619	25589	6760	967	430	3436	599	612	296	3203	66348

The following is a statistical account of the accidents brought to the London Hospital during the year 1850.

Admitted as In-patients, 2222	In-patients, Male, 1670	Out-patients, Male, 4865
Treated as Out-patients, 6977	„ Female, 552	„ Female, 2112
Total during the year, 9199	Total, In-patients, 2222	Total, Out-patients, 6977

Consisting of the following cases :—

	No.	In-patients.			Out-patients.		
		Male.	Fem.	Total.	Male.	Fem.	Total.
Fractures	1084	391	111	502	376	206	582
Wounds	2598	343	94	437	1569	592	2161
Contusions	3444	571	195	766	1854	824	2678
Sprains	1040	97	28	125	619	296	915
Dislocations	112	16	1	17	69	26	95
Concussions	39	35	2	37	2	..	2
Burns and Scalds	429	86	71	157	160	112	272
Hernia	65	26	18	44	14	7	21
Bites of Dogs	101	8	1	7	72	22	94
Attempts at Suicide and Poisoning	25	6	17	25	..	..	..
Various	262	91	14	105	130	27	157
Total during the year	9199	1670	552	2222	4865	2112	6977

The fractures consisted of the following cases :

	In-Patients.	Out-Patients.	Total.
Skull	9	—	9
Face	18	6	24
Spine	4	—	4
Ribs	119	39	158
Sternum	—	—	—
Pelvis	1	—	1
Thigh	53	10	63
Patella	15	—	15
Leg	177	4	181
Foot	16	2	18
Shoulder-bone	5	—	5
Collar-bone	9	142	151
Arm	31	67	98
Fore-arm	27	227	254
Hand	18	85	103
Total	502	582	1084

Report of the 2222 In-patients.

	Discharged Cured.	Died.	Remain in Hospital.	Total.
Fractures	395	32	75	502
Wounds	399	14	24	437
Contusions	720	14	32	766
Sprains	120	1	4	125
Dislocations	17	..	..	17
Concussions	33	4	..	37
Burns and Scalds	107	19	21	157
Hernia	30	9	5	44
Bites of Dogs	6	1	..	7
Attempts at Suicide and Poisoning	20	4	1	25
Various	29	6	10	105
Total	1936	114	172	2222

Of the 114 deaths, 13 occurred on the first day of admission, viz. :—

Fractures	4
Wounds	1
Contusions	2
Concussions	3
Burns	3
Total deaths 1st day	13
„ 2nd „	18
„ 3rd „	17
„ 4th „	8
„ 5th „	7
„ 6th „	2
„ 7th „	4
Total deaths in 1st week	69

Of the 9199 cases of accidents admitted during 1850, 2222 were in-patients, and 6977 out-patients. Of the in-patients, 1936 were discharged cured ; 114 died—13 upon the first day, and 69 within the first week ; and 172 remained in the hospital at the end of the year.

The relative mortality in the London Hospital is low ; and this is probably in a great measure due to the open situation in which it stands. We copy a return of the number of patients admitted each year into the wards, from 1835 to 1850, both inclusive, and also the number of deaths in each year.

Date.	No. of Patients.	Deaths.	Per cent.	Date.	No. of Patients.	Deaths.	Per cent.
1835	2735	277	10	1843	3530	244	7
1836	2815	309	10·5	1844	3691	224	6
1837	2961	418	14	1845	3625	228	6·25
1838	2987	371	12·5	1846	4092	280	7
1839	3247	305	9·5[1]	1847	4159	276	6·6
1840	3339	296	9[2]	1848	4185	263	6·25
1841	3308	331	10	1849	4090	298	7·25[4]
1842	3300	260	8[3]	1850	3894	277	7

The mortality for 1850 may be thus apportioned :—

Physician's cases	127 deaths.	11·66 per cent.
Surgeon's ditto (accidents)	114 „	5 „
„ „ other cases	36 „	6 „

It hence appears, that the relative mortality among the medical cases is much greater than among the surgical cases or accidents.

The wards of the Hospital are ventilated by simple round ventilators in the ceilings, communicating with air-bricks in the walls. The windows are opened slightly at the top when necessary. There is no hot air in use ; the wards are all heated by open fire-places. Water is supplied from the East London Waterworks, by high pressure, to cisterns on the roof. Hot water is laid on throughout the house, from cisterns on roof, heated by steam from boilers in basement. There is a bath-room, with all apparatus complete, to each of the eight divisions into which the wards are classed. There are also bath-rooms for out-patients ; and a medicated bath is prepared for in or out-patients, as required.

[1] This year new sewers were completed (about August).
[2] This year the hot air was discontinued in the wards (at Christmas).
[3] This year the new wing was opened.
[4] This year the cholera prevailed.

The expenditure of the hospital is, on an average, £15,000 a-year ; and, to meet this, the total fixed income is only £10,000, leaving £5,000 per annum to be made up by private subscriptions, donations, etc. In 1850, the expenditure amounted to £14,472 : 12 : 11, and the receipts to £13,522 : 6 : 5, leaving the expenditure in an excess of 950 : 6 : 6 over the income. The cost for each out-patient is about 1 : 8¾ ; *i. e.*, about 7½ for surgery, and 1 : 1½ for Dispensary, including brandy, wine, etc. The cost incurred for the in-patients (including the amount expended in repairs, extensions, and improvements, which, for some years past, have been necessarily very heavy), was £12,754 : 9 : 5, or £3 : 5 : 6 per head.

The pecuniary resources of the London Hospital have fluctuated greatly at different periods, and its utility has thereby been much limited. In 1807, the available income having been reduced to £2,840, and the patients to 130, an appeal was successfully made to the benevolence of the public. In 1814, a second appeal enabled the governors to complete the west wing, and receive an additional number of patients. The centenary festival, in 1840, presented an appropriate occasion for another appeal, which was very successful. The extension of the east wing was completed in 1842 ; but even now the income is insufficient to enable the committee to extend the benefits of the building. During 1850, 196 applicants, certified as proper cases for admission, were rejected from this reason.

Besides special arrangements for Jewish patients,—a large number of the subscribers belonging to the Hebrew persuasion,—there are, in connexion with the Hospital, a Samaritan Society and a Medical School.

The Samaritan Society was established in 1791, at the suggestion of the late Sir William Blizard. The objects of this benevolent institution are well expressed in a document appended to the last report of the hospital, the substance of which we now give.

Domestic servants, mechanics, and labourers, are often obliged to quit their places to go into the Hospital ; and, when discharged convalescent, are often without a friend or home. For the relief of these—and especially of young females—this Society affords its aid. Many, who have expended all their money, or even pawned their clothes, previous to admission, in order to support themselves and obtain medical assistance, are, under such circumstances, aided by the Samaritan Society ; relief is also occasionally afforded to the families of patients living at a distance. For those patients from a distance who, on their recovery, have not the means of returning home, applications are made to societies instituted for the express purpose, or places are taken, and the fares paid, by such conveyances, as are most suitable to their different stations in life. Beds are regularly engaged at the Margate Sea-Bathing Infirmary, for such as require the benefits of that institution ; and, where necessary, mechanical apparatus are afforded to those who have undergone operations, or have been the subjects of partial loss of sight, or of rupture from sudden causes. Patients who are destitute of sufficient clothing are relieved. For servants whose conduct has been good while in the hospital, exertions are made to procure situations ; and a great number of sailors and labourers have employment procured them, by letters addressed to captains of ships, dock-masters, and others, who have work at their disposal. Extra-diet and other comforts, such as no medical institution can with propriety or convenience afford, are occasionally administered. Many also of the out-patients, as well as the families of those within, are visited and relieved.

In 1822, a library for the use of the in-patients was commenced, at the Society's expense, by the purchase of between 300 and 400 volumes ; and has since been increased to nearly 600 volumes, consisting of works of piety and religious instruction, biography, natural and general history, and select works of useful and interesting information.

The Samaritan Society possesses about £15,000 funded property. The following is a general account of the relief afforded by it from 1st March 1850, to 28th February 1851.

442 Patients relieved with money, or by having various necessary expenses paid	£363 : 10 : 0½
Clothing supplied	4 : 0 : 9
Mechanical aids	42 : 16 : 5
	£410 : 7 : 2½

Medical Instruction. The lecture building is situated at the east end of the hospital, and consists of a theatre, an anatomical and pathological museum, chemical lecture room, and dissecting room. There are teachers of all the ordinary branches of medical science. The anatomical museum is open to the students daily from 11 A.M. to 2 P.M.

Clinical instruction is given by the physicians and surgeons, and consists chiefly of short observations on the cases at the bedside, and occasional lectures on cases of interest and importance.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

Purulent Ophthalmia of Newborn Children. (Reported by James Cummin Toshach, Esq., M.R.C.S.)

No one can witness the practice of this great Ophthalmic Hospital, without being painfully struck with the lamentably frequent loss of sight from purulent ophthalmia in newborn children,—a disease entirely within the control of very simple remedies, if early applied. It may be useful to call attention to this disease, and its appropriate treatment, because instances are frequent, in which medical men overlook its early stages, or fail to employ the suitable measures of relief. The patients are peculiarly attractive of pity, from their tender age, their utter helplessness and unconsciousness, and the terrible consequences to which ignorance or neglect exposes them. Were the community, and the members of our profession, aware how large a proportion of blind persons owe their calamity to this very tractable inflammation, greater efforts, we imagine, would be made to inform and tutor the parish midwives, or other attendants on the very poor, to be on the watch for its first approach, in the children of women suffering from vaginal discharges, and to adopt without delay the requisite precautions to cut it short or subdue it.

Commencing usually on the third day after birth, and attaining its height at periods varying from the seventh or eighth day to three weeks, it affords ample time to interpose the necessary relief. But this precious interval is too often allowed to elapse without anything being done, beyond the most imperfect cleansing, the application of warm water, or that popular remedy—the mother's milk—while enormous quantities of creamy pus are accumulating behind the lids, which are spasmodically closed upon the eye, and keep it bathed and pressed upon by the morbid secretion. No doubt, the original intensity of the disease varies much, either from differences in the constitutional strength of the infant, or more probably and more often from difference in the strength of the virus, to which, we believe in common with most writers, this inflammation may be traced. But in numerous cases, the delay of which we speak is more than sufficient to establish beyond recall those destructive changes in the texture of the cornea, and possibly of deeper parts, which entail certain and irreparable blindness. And how truly painful is the task then imposed upon the surgeon, to announce to the nurse, or perhaps the mother of the little sufferer, that already the time has passed when the eye might have been saved; that they have sought relief too late, and that the child is consigned to a life of darkness.

To show that we are not exaggerating the importance of this subject to the community, we shall here subjoin a table, shewing at a glance the chief particulars of some cases of purulent ophthalmia that presented themselves in the practice of Mr. Bowman in the course of one year. These cases are selected in consequence of their shewing the results of neglect or bad treatment; many others applying early, and treated in the way presently to be mentioned, escaped with perfect sight. The number of cases of purulent ophthalmia of children treated annually at this Hospital is over 200.

Duration of Disease.	Treatment previously pursued.	Condition of Eye when brought.	Result.
A. 11 days.	Nothing done.	Right cornea sloughing.	Partial leucoma, anterior synechia, strabismus commencing.
B. 3 mths.	Warm water and mother's milk.	Both leucomatous, with tendency to staphyloma.	Staphyloma of whole of right, universal leucoma of left, not bulging.
C. 3 weeks.	Warm water, astringent dps.	Right cornea clear; left given way from a slough	Staphyloma of left followed, but subsided without operation. Leucoma is now flat, and globe half shrunk.
D. 10 days.	Warm water. Lard at night.	Right cornea sloughed; left clear.	Right eye lost, left cornea clear.
E. 1 mth.	Milk and water. Poultice.	Both corneæ sloughing; both upper lids everted	Left cornea leucomatous, right nebulous, lids righted.
F. 1 year.	Solid arg. nit. several times applied for first week.	Staphyloma of both, especially of left.	
G. 3 weeks.	Warm water.	Both corneæ partially sloughed; left worst.	Synechia anterior with leucoma in both; in right are three minute opaque white dots on the anterior surface of the lens, one of which is central. The left pupil is small, much of pupillary border being adherent to the leucoma.
H. 1 year.	Nothing done for a fortnight.	Staphyloma of right; left cornea destroyed; and front of globe flat.	
K. 5 weeks.	No treatment.	A puny child; difficult to ascertain the state of the cornea.	Died in convulsions.
L. 6 weeks.	Drops from a druggist.	Right cornea nebulous.	
M. 7 weeks.	Born in workhouse. Drops used twice a day.	Central leucoma of the right cornea.	

The treatment which is pursued at the Royal London Ophthalmic Hospital, in these cases, is simple and effectual. It consists, in general, of nothing more than the frequent injection over the front of the eyes, between the lids, of a solution of alum (alum gr. iv, water ʒi), and then anointing the lids with lard, to prevent adhesion. If the inflammation is very severe and recent, the first syringing is with a solution of nitrate of silver (gr. iv to ʒi, never stronger), and afterwards with the alum; the latter being thrown over the conjunctiva so as thoroughly to cleanse it, every half hour, every hour, or every two hours, according to the intensity of the inflammation, and the rapidity with which the purulent secretion is renewed. After

each syringing, the lard is applied, so that the lids may not agglutinate in sleep. No leeches, blisters, or other auxiliary means are used; nor is the solid nitrate of silver, or strong ointments of it, ever employed. Leeches, though sanctioned by even so judicious an authority as Dr. Mackenzie, are deemed unnecessary; and they are certainly hazardous at this tender age, and in this situation, especially among the poor, treated as out-patients. And the astringent solution, of moderate strength, is considered at least equally efficacious with the solid caustic, while it gains more uniform access to all parts of the inflamed membrane, and it is a safer and less painful remedy.

The effect of this treatment is soon apparent, in a decided diminution of the discharge, and its more gleety nature, in lessened vascularity and intolerance and spasm, as well as in the altered temper of the infant. A few days are generally sufficient to produce these results, and the subsequent progress is steadily onwards to recovery. And the advantage of it is, that it is equally applicable in all periods of the inflammation characterised by purulent discharge. If used early, it saves the eye; if delayed till the cornea has suppurated or ulcerated, or the iris or lens protruded, it has the salutary effect of arresting the disorder, and preventing further destruction. And a very great advantage indeed is this—one perhaps hardly predicable of any other remedy in any other disease—at least to the same extent. The simplicity of the treatment, and its general appropriateness to all forms and stages of the disease, should serve to give it currency among those little conversant with eye diseases; and may even sanction its use by the parish midwives as a nurse's remedy; of course only where the aid of a regularly educated medical man cannot well be had.

It may not be out of place to indicate the best means of performing this little operation of syringing within the lids—an operation easily performed badly; and, if badly, as well not done at all. The infant is laid on its back, the head on one side, the cap off, the clothes thrown off the neck, so as to escape being drenched. The head being held between the knees, the lids are gently opened by separating the finger and thumb placed on each, and resting on the margin of the orbit, so as not to compress the globe; and the fluid is then thrown in different directions between them, so as to wash the whole inner surfaces, and clear out the pus. It is well to use a four ounce syringe, which can be worked with one hand. The nozzle should be rounded, and its bore very fine. A single charge of the instrument is then sufficient for the entire operation, and the whole is performed with celerity, effect, and safety.

It must not be inferred, because no mention is made of them, that medicines are not administered internally. Particular attention is always given to the state of the bowels, to the constitution and habit of body; and such remedies as seem to be appropriate are prescribed.

GUY'S HOSPITAL.

[COMMUNICATED BY DR. GROWSE, M.B.LOND.]

The OBSTETRIC DEPARTMENT of Guy's Hospital, under the immediate superintendance of Drs. Lever and Oldham, comprises two distinct portions:—1st. That which provides for the efficient attendance of Lying-in Women; and 2ndly. That which relates to the Treatment of Diseases of the Womb and its Appendages.

The Lying-in Charity, established in the year 1833 by Mr. Harrison, the late Treasurer of the Hospital, has since that time undergone many and highly important alterations in its organisation, and has lately been brought to such a condition, that, while it provides the most efficient attendance upon those women who choose to avail themselves of its services, it, at the same time, affords to the student the largest opportunities of acquiring a thorough

knowledge of the art and science of obstetrics. He is endowed with just so much responsibility, as may enable him to feel that amount of interest which is essential to the competent fulfilment of his duties.

Such persons as live within a convenient distance from the hospital, and who are, from their position in life, entitled to the benefits of the charity, are provided with attendance and medicines, at their own houses, during the puerperal state; and a limited number, upon the recommendation of the attendant, are allowed such necessaries of diet as may be considered requisite to further their convalescence. Moreover, as the poverty of some disables them from procuring that amount of linen, which is essential to cleanliness and comfort, the charity affords them the loan of a sufficient quantity, upon the recommendation of any respectable householder.

All persons are requested to make their applications for attendance, at the office of the charity, between the hours of 10 A.M and 12 A.M., on any day, with the exception of Sunday, Tuesday, and Saturday. Their names are then entered in books provided for that purpose, and a registry is at the same time made, of the place of residence of each, her present age, and that at which she married; the number of children she has had, their respective sexes, and whether born dead or otherwise; the number of miscarriages, or abortions to which she has been subject; her country, complexion, and the character of her previous labours. A card is then given her, containing her name and address, which she is desired to send to the charity upon the supervention of labour, when she will be provided with immediate attendance.

The scholastic staff of the charity, under the surveillance of the Obstetric Physicians, consists of three resident obstetric clerks, who are appointed by the Treasurer, upon the recommendation of the Physicians, and a further corps of gentlemen anxious to attend upon cases. The former are provided with rooms and commons, and are chosen from those students who have, during their pupilage, evinced the greatest regularity in their attendance upon lectures, who have devoted themselves with the greatest diligence to the opportunities afforded them of acquiring a practical knowledge of this branch of their profession, and who have attained the largest amount of general proficiency.

The Senior Clerk holds office for the space of one month. He must be a member of the College of Surgeons, or a licentiate of the Apothecaries' Company, and must have filled the office of Second Clerk. It is his duty to provide a competent assistant staff, and to see that every person, who demands the services of the charity, has efficient and speedy attendance. He is, moreover, expected to hold himself ever in readiness to attend any call for assistance, real or imaginary, which may be made upon him; and with the sanction, or in the presence of the Obstetric Physician, he is permitted to use such means, instrumental or otherwise, as may be deemed necessary for the furtherance or completion of labour. In addition, he is responsible for the due entry of all cards and certificates in their proper books; and, at the expiration of his month of office, is expected to render to the Treasurer and Physicians an account of the proceedings of the charity during that period.

The Second Clerk holds office also for one month. He must be a member of the College of Surgeons, or a licentiate of the Apothecaries' Company, and must have filled the office of Junior Clerk, or be especially recommended. It is his province to render his assistance, upon application, in all cases, real or otherwise, of disease, or tardy convalescence supervening upon delivery; to see that all proper cases are reported, and to enter the certificates of attendance, with any remarks upon the nature or complications of the labour, which may be made by the attendant. Should the Senior Clerk be pre-engaged, he is expected to discharge his duties; and at the expiration of his month of office, is established by the Treasurer, upon the recommendation of the Physicians, as Senior Clerk.

The Junior Clerk is in residence for a fortnight. It is his duty to attend all cases that occur during the night; and, during the absence or pressing engagement of any gentleman on duty during the day, to undertake the management of those cases which would otherwise have fallen to his share.

The Assistant-Staff consists of a corps of students, eight in number, each of whom undertakes to attend all cases which may occur in any stated two hours between 6 A.M. and 10 P.M.; in addition, there are several gentlemen who enter their names at the office, for the purpose of undertaking the management of casual cases occurring during the night or day in the absence of the junior clerk or gentleman on duty.

Since the formation of the charity, the number of women who have been attended by the students attached to the hospital has continued steadily and progressively to increase. Thus, during the first seven years after its establishment, 4666 were attended; during the second seven years, 6008; and from Oct. 1847 to Oct. 1850, no less than 4055 poor women availed themselves of the benefits of this institution; and, inasmuch as in almost every month more women enter their names than are attended during the same period, there is a certainty of much further enlargement.

For the treatment of such diseases as are peculiarly incidental to women, two wards are set apart, each containing ten beds. Into these, patients may be admitted, when a vacancy occurs, every Wednesday, at 10 o'clock A.M., on their making application at the Hospital; such cases having the preference as shall be found upon examination to be the most severe, and at the same time amenable to treatment.

Each obstetric physician has his separate ward, and is assisted in his duties by a clerk, who is chosen from such of the students as shall appear to the physician to be the most deserving, and whose character will bear the strictest investigation. It is his province to accompany the physician when he visits the ward, and assist him in his examinations, whether manual or otherwise, either of the in or out-patients; and in his absence, to prescribe such remedies as may be necessary for the amelioration of urgent symptoms. He is, moreover, required to see that any application which may be thought requisite is delicately and properly made, and to keep a correct report of all cases which are admitted during his month of office.

Drs. Lever and Oldham attend every Saturday morning at the hospital, for the purpose of seeing and prescribing for out-patients. The latter begins his duties at 10 A.M., and the former two hours later. A limited number of letters (twenty) are allowed to each physician, and these are distributed to those patients whose cases appear the most to require treatment. Every letter is presentable four times, unless the patient shall have failed twice in her attendance, when the letter will be taken from her, and she will be considered as a defaulter, and have to run the same risk with others in procuring a fresh one. Upon each of the letters, the name of the physician under whose care the patient may be, is printed, and a registry is kept upon it of the date of attendance, with the name, age, residence, and occupation of the woman or her husband; a card is at the same time given her, bearing the number she holds among the out-patients, and this she is required to present at each separate attendance.

Amongst the cases which present themselves, the diseases, and the modes of treatment of each class under its peculiar conditions, are too various, and would take up too much space to be included in this short report.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 25, 1851.

Dr. Addison, President, in the Chair.

Case of Small-pox occurring a Third Time after Vaccination, and proving Fatal. By John Webster, M.D., F.R.S. Three well-marked examples of the recurrence of small-pox, met with in the same family, were related, one of which terminated fatally. The case especially referred to by Dr. Webster was that of H. N. N., who had been vaccinated satisfactorily in 1827, when three months old. Notwithstanding this circumstance, he was attacked by small-pox in 1833, along with an elder brother, who had been likewise vaccinated. Both patients recovered. In 1838 the two lads were again attacked by variola, along with a third brother, likewise regularly vaccinated. All three got quite well in due time. Subsequently, Mr. H. N. N. went to India in the Company's service, where he was seized, in April 1850, with the usual and well-marked symptoms of small-pox, which soon became confluent, and proved fatal at Dharwarinth, on the 13th of that month; this making the third time this gentleman had been attacked by variola, although previously vaccinated.

Case of Confluent Small-pox after a Third Vaccination. By Dr. A. P. Stewart. Case. A gentleman, 25 years of age, who had been five years apprenticed to a gentleman in extensive general practice in Devonshire, had been most successfully vaccinated when six months old. Requiring to attend variolous cases, he had the operation repeated in July 1849, without effect, and again in May 1850, with much irritation, inflammation, and swelling of the arm, the lymph from the vesicle not communicating the disease. He came to London to begin his medical studies on the 13th of October last, having been exposed to infection the same morning. The train of premonitory symptoms set in on the 15th, and was followed (on the 17th) by the appearance of a closely-packed eruption of papulæ all over the body. For four successive nights, mild delirium was present; but the sore-throat and conjunctivitis, occasioned by the presence of vesicles, were quickly relieved by the application of a solution of nitrate of silver; and the pulse, previously as high as 120, never rose above 100 after the seventh day. The vesicles, though very numerous on the hands and feet, caused little or no pain; on the eleventh day of disease, and the seventh of eruption, they were at their height; and, in the course of the next two days, had nearly all dried up and scaled off, with very trifling discharge. Convalescence went on rapidly.

Dr. Stewart referred to the prejudice which existed in many parts of England against vaccination, and the extent to which inoculation for small-pox, in spite of the law, prevailed. The conclusion drawn was, that vaccination offered more protection against secondary small-pox than did inoculation, for the mortality was much less in those persons who had been vaccinated than in those who had been inoculated.

Dr. Mayo spoke of an epidemic small-pox at Edinburgh some years since, in which the disease was confluent, and more fatal among the inoculated than among the vaccinated, the difference in favour of the latter being remarkable. Cases of small-pox after vaccination did not lessen the value of that operation. In three cases of supposed measles, at the Middlesex Hospital, the exanthem proved to be secondary small-pox; and he believed that many cases, reported to be second attacks of measles, were really not such.

Dr. Gregory observed, that in the first case, the fatal attack of small-pox occurred in India, where the intense heat rendered that disease especially dangerous. In Dr. Stewart's case, revaccination had been tried, and had caused great inflammation; nevertheless, the patient was again attacked with small-pox, showing the little use there is in revaccination. He had long been of that opinion. Inoculation gives the disease, small-pox; and, although some may be attacked again, it is generally protective for life. Vaccination protects up to puberty; but after that a change takes place, and the individuals become liable to small-pox. In 1815, when those first vaccinated in infancy attained the period of puberty, modified small-pox was first heard of, and it has since continued to occur. Such cases are continually admitted into the Small-pox Hospital, and their mortality has been found to be five per cent. He did not consider the cicatrices a good test of perfect vaccination. When they were complete, they were satisfactory; but their imperfect condition would not imply equal imperfection in the operation, as that might be the result of subsequent local inflammation, the constitution being still protected. Vaccination, however, should not be discouraged, because it served to protect one-half the population, statistics showing that one-half of those born die before puberty.

Dr. Webster was of opinion, that in many cases where small-pox occurred after vaccination, that operation had been imperfectly practised. In his case, it was remarkable, that the second attack of the disease involved several members of the same family, but the sons only; the daughter escaped. It would seem as if certain families could not be protected; and a case mentioned by Dr. Macintyre would appear to confirm this opinion. Two young men, both vaccinated, went abroad. The one in India caught the disease, and died. The other, in South America, although he had been vaccinated and inoculated, hearing of his brother's death, was revaccinated; still he got small-pox, and nearly died.

Dr. Copland believed that vaccination was only a temporary protection, and that, as the person became older, its influence wore away.

Anniversary Meeting, March 1, 1851.

Dr. Addison, President, in the Chair.

It appeared from the Treasurer's report that the Society had exceeded its receipts during the past year by £308:7:10, the receipts being £1809:9:7, the expenditure £2117:17:5. After the special business of the day, the election of officers, etc., had been transacted, Dr. Addison delivered the Annual Address, in the course of which he feelingly alluded to those members who were lost to the Society by death during the preceding twelvemonth,—Dr. Prout, Dr. Haviland, Mr. Crosse, Mr. Malyn, Mr. Safford Lee, and Mr. Joseph Freeman. He read also a brief sketch of each of these gentlemen; that of Dr. Prout having been written by Dr. Golding Bird; of Dr. Haviland by Dr. Paris; of Mr. Safford Lee by Mr. Quain; and of Mr. Joseph Freeman by Mr. Green.

The following gentlemen were elected Office-bearers for the ensuing year. President. Joseph Hodgson, Esq., F.R.S. Vice-Presidents. Thomas Mayo, M.D., F.R.S.; John Thomson, M.D.; William Coulson, Esq.; Alexander Shaw, Esq. Treasurers. Robert B. Todd, M.D., F.R.S.; Richard Quain, F.R.S. Secretaries. Seth Thompson, M.D.; Campbell De Morgan, Esq. Librarians. Henry Pitman, M.D.; James Dixon, Esq. Other Members of Council. George Cursham, M.D.; Sir James Eyre, M.D.; William Macintyre, M.D.; William Merriman, M.D; Alexander Sutherland, M.D., F.R.S.; James Clayton, Esq.; Henry Charles Johnson, Esq.; Henry Hancock, Esq.; John Hilton, Esq., F.R.S.; Andrew M. M'Whinnie, Esq.

Tuesday, March 11, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Compression of the Fœtal Head during Birth. By T. Ogier Ward, M.D. The following were the main propositions. 1. Under all circumstances, almost without exception, the head of the child undergoes a change of shape during birth, from which it recovers in the great majority of instances immediately, from the elasticity of the bones, or from the effects of the first cries in producing determination of blood to the head. 2. In some cases, the head retains its compressed shape for an indefinite period, during which the child is apt to suffer from attacks of flatulence, convulsions, paralysis, and other cerebral affections. 3. There is reason to believe that idiocy and insanity may also be produced by this deformity of the skull, and the consequent compression of the brain, when it is not removed during childhood. 4. The most efficacious means of relieving the brain from this pressure is to excite the cry of the child after birth, and thus, by causing distension of the cerebral vessels, to promote expansion of the cranial bones. Thirteen cases were adduced in support of these propositions, of which four were cases of convulsions, one of symptoms of insanity, one of paralysis, that ceased when the head regained its form—and all suffered more than usual from flatulence. In two of the four cases of convulsions, the fits came on several weeks after birth, and were immediately followed by the restoration of the head to its normal shape.

Case of Chylo-Serous Urine. By J. Pearce, M.D., H.E.I.C.S. With an Analysis of the Urine. By J. E. Mayer, Esq., Madras Medical Service. Case. A woman, born in India of English parents, twenty-two years of age, the mother of three healthy children, had been nursing the youngest for ten months, when first seen by the author in March 1850. For the last five months the urine had been pale and milky, sometimes forming a jelly on cooling : the quantity had been rather large. The same state had been observed after her other confinements, and had ceased after weaning. On this occasion, she was recommended to wean the child when she first applied for advice. She declined, however, and was put on a course of tonics, with a generous diet. This plan was continued for two months, having been interrupted for a few days by a feverish attack. At the end of this time, no improvement having taken place, the patient removed to Bangalore, and came under the observation of the author. The quantity of the urine was at this time moderate ; it was milky, formed a jelly when cool, and coagulated on the addition of nitric acid. The child was now weaned, the tonic plan of treatment continued, and in about three months the patient returned to her family, considering herself well. The urine was less milky, and did not coagulate on the addition of nitric acid, but still formed a jelly on being allowed to stand for some time without being agitated. The analysis, by Mr. Mayer, shewed that no casein, pus, or phosphates, were present, but that it contained albumen and an excess of fat ; from which he inferred, that it is "to the presence of animal fat and albumen", that the milky appearance of the urine is attributable.

Tuesday, March 25, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Necrosis of Bones of Cranium : removal of Large Portions. By John Drummond, Esq. Case. In 1845, a seaman belonging to H.M.S. *Mutine*, fell down some stone steps at Sierra Leone, receiving a contused wound of the scalp, for which he was admitted into the Royal Naval Hospital at Plymouth, in October of the same year. The bone, which had not been supposed to be injured, was found denuded of its pericranium to some extent, on the left side of the occipital region. After an attack of erysi-

pelas, followed by numerous purulent deposits under the scalp, necrosis went on rapidly ; there was oozing of pus from beneath the diseased bones, and gaping of the coronal and sagittal sutures, the brain pulsating very distinctly in the spaces. In July 1846, he was removed to the Melville Hospital at Chatham. During the six years he has been under observation, there have been repeated attacks of erysipelas, followed by profuse suppuration. Both tables of the skull have suffered in some places ; in others only the external. About five square inches have been lost from the frontal and right parietal bones, and from the squamous portion of the right temporal. The whole of the occipital bone, to within an inch of the foramen magnum, is deficient, except about two inches in the centre, which are in process of separation. On the left side, there has been less destruction of the bones ; but extensive caries is going on there, and fœtid pus is discharged from several openings. At no point does there appear to have been any tendency to reproduction of bone or arrest of the disease.

Dr. Webster related the case of a suicidal lunatic in Bethlem Hospital, who, in the year 1833, one day laid his head upon an open fire, then burning briskly. The hairy scalp and integuments were much injured ; serious symptoms ensued, but life was saved, although the entire skull-cap exfoliated some months afterwards. He lived till September 1841 ; and at his death suffered from a hernia cerebri, the size of a hen's-egg, consisting principally of the posterior part of the left lobe. At the *post-mortem* examination, the vacuum, where the skull had exfoliated, was found filled up by a thick, dense, tough, and very firm structure, in which the dura mater and external cicatrix were inseparably blended. Dr. Webster also alluded to the remarkable case lately recorded in the *American Journal of the Medical Sciences*, in which recovery took place after an iron bar had been driven through the head.[1]

Mr. Shaw exhibited two specimens of extensive loss of the entire thickness of the calvarium, to show that the vacant spaces had been filled up in great measure by newly formed bone. One had been produced by scrofulous lupus twenty years before death, in a man fifty years old. No cerebral symptoms occurred till shortly before death, when he had hemiplegia from ramollissement of the right hemisphere of the brain near the corpus striatum. In the second case, the patient, a man about sixty years old, said that he had had a severe fracture of the skull forty-five years before, and that many large pieces had been removed by the surgeon.

Mr. Hodgson said, that in necrosis of the bones of the skull, there was only a slight deposit of bony matter. When a large portion of the skull was removed, the opening was filled up by fibro-cartilage, with a small portion of osseous matter in parts of it.

Treatment of Anasarca by Puncturing the Legs. By John Hilton, Esq., F.R.S. Experience had convinced the author of the great relief which anasarcous patients receive, when the fluid is allowed to escape through artificial openings ; and that, when the operation is carefully performed, it is not usually followed by unfavourable results. The instrument recommended to be employed was a very narrow, sharp-pointed lancet. Two, or sometimes four punctures, should be made by it on the outer side of the thigh, by passing it obliquely through the subcutaneous areolar tissue, so as to reach, but not wound, the fascia covering the muscles. The limb or limbs should be wrapped separately in warm blankets, which should be often renewed, to prevent the limb from becoming cold or chilled. To prevent excoriation, when there was reason to apprehend this, capillary conductors should be used, in the form of worsted threads laid over the punctures, and passing into proper receptacles. By these means, the author believed that

[1] See London Journal of Medicine, September 1850, p. 893.

the external veins were allowed to become distended with blood, so as to relieve visceral congestion, and prevent effusion into the serous membranes.

Dr. C. J. B. Williams agreed with the author as to the advantages to be derived from puncturing the legs in anasarca. He thought, however, that the punctures afforded relief, not merely by getting rid of the superfluous serum, but by purifying the blood of those materials—especially urea—which were not removed by the excretory organs.

Fracture and Distortion of the Pelvis, with an unusual Form of Dislocation of the Femur. By Charles H. Moore, Esq. Case. J. F. H., a stone-sawyer, had been crushed, several years before death, beneath a piece of timber. At the age of sixty, he died of disease of the heart and kidneys, under the care of Dr. Seth Thompson, in the Middlesex Hospital. In addition to the immediately fatal disease, the bones were found thickened, heavy, course, rugged, and porous; the intervertebral substance was composed of alternations of calcareous matter and soft cartilage; the arteries almost everywhere, and the valves of the heart, were covered with calcareous matter. The left os innominatum was broken across the acetabulum, the right just in front of it; the ischio-pubal ramus was broken on each side. None of the fractures had united, though there were considerable portions of callus. The left bone remained in three fragments, corresponding almost precisely with its original segments; the right was broken in two. The head of the left femur had been driven between the fragments of the os innominatum into the pelvis, and lay only half an inch below the promontory of the sacrum. Its trochanter fitted into a shallow excavation on the outside of the ilium, and the joint was constituted by the thin edge of the ilium and the top of the shaft of the femur, close to the trochanter. A partial new socket had been formed by the expanded ends of the pubes and ischium. The body of the left ischium was displaced considerably inwards; but no material change had taken place subsequently to the injury, in the bones on that side of the pelvis. On the right side, the hip-joint was sound; and the shaft of the right femur was removed further from the centre of gravity than the left, by the whole length of its head and neck. Hence the spine had become curved forward and to the right in the lumbar and upper sacral regions; whilst the acetabulum, unsupported in front because of the ununited fractures of the pubes, had become elevated towards the depressed spine and promontory. The ilium had, partly from pressure, and partly from some softness, become bent above the sacro-sciatic notch; and the lateral mass of the sacrum had lost three-fourths of an inch of its natural breadth. The inlet, cavity, outlet, and sacro-sciatic notch on the right side were much narrowed, and the promontory of the sacrum was only one inch and a quarter distant from the pelvic surface of the right acetabulum. The ischium was pressed inwards and upwards, and encroached on the pelvis and the perinæum, and the symphysis pubis was thrust to the left of the mesial line.

Tuesday, April 8, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Relation of Sleep to Convulsive Affections. By W. F. Barlow, Esq. After noticing the frequent occurrence of convulsive affections during sleep, Mr. Barlow treated of the direct or predisposing causes of the convulsions, under the following heads. 1. The state of the circulation and respiration. 2. The condition of the motor force and muscular irritability. 3. The emotion of dreaming. 4. The withdrawal of the will. Dreaming had a very ample connexion with convulsions; and the causes of both had a most wide, though in great part indirect, relation. Great stress was laid on the withdrawal of the will. The inverse ratio of reflex movements, and of involuntary movements not reflex, to the power of volition, had not been duly applied to the solution of certain phenomena which occur during sleep.

The author referred to numerous experiments on man and the lower animals, by himself, Professor Volkmann, and Dr. Marshall Hall, which concurred to shew how often and how extremely a quiescent will tended to produce spasmodic affections. In convulsions, when the person was awake, there was not merely an evident, and sometimes successful, striving of the will. The author concluded by referring to certain motor local nervous affections—paralysis agitans, mercurial erethism, and chorea, which were wonderfully under the sway of slumber.

MEDICAL SOCIETY OF LONDON.

February 22, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Diarrhœa as a hitherto unnoticed [?] Symptom of Menstruation: Use of Purgatives in the different Menstrual Epochs. By E. J. Tilt, M.D. Catamenial diarrhœa was examined with regard to its occurrence: 1. As a prodroma of menstruation: 2. During its regular establishment: 3. At its cessation.

1. As a prodroma of menstruation, diarrhœa scarcely ever occurs. 2. As a symptom of regularly-established menstruation, it occurred in 88 out of 161 cases. In these, it preceded the menstrual flow in 45; it accompanied it in 31; both preceded and accompanied it in 10; and in two instances habitually followed, not having preceded or accompanied it. 3. As a symptom of the cessation of the catamenia, diarrhœa was noticed in only 8 per cent. of the cases examined. The diarrhœa is usually unattended with pain, but sometimes nausea and slight colics precede for one or two days. When it appears at the change of life, it generally appears at irregular intervals. Dr. Tilt believed that the ovaries not only call the uterus into action, but also the nutritive organs, especially the intestines, which are under the influence of the same ganglionic nervous system.

With regard to purgatives during fully-established menstruation, Dr. Tilt would give them in defective menstruation, not dependent on serious organic lesion. Care should be taken, however, to give them at the time when the premonitory diarrhœa ought to occur, so as not to anticipate the catamenial period. In amenorrhœa and chlorosis, Dr. Tilt used an emeto-cathartic at the initial part of the treatment, followed by steel and bitters; but if there was not improvement, he put aside the steel and bitters, and repeated the emeto-cathartic.

After the cessation of menstruation, purgatives must be given habitually, to diminish plethora. The soap and aloes pill of the Pharmacopœia, in doses of five or ten grains, at dinner, was what Dr. Tilt frequently recommended. Flour of sulphur alone, or with sesquicarbonate or biborate of soda, and ipecacuanha, might be given in milk, to act mildly on the bowels.

March 1, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

Congenital Malformation of the Genito-Urinary Organs. Mr. T. H. Wakley exhibited a man suffering from malformed bladder, and stated that he proposed to try the effect of a plastic operation.

The New Superphosphate of Iron. Dr. Routh stated, in reference to the new preparation of iron he had brought before the Society on a former occasion, that it had been analysed and found to be a new salt—a superphosphate of iron dissolved in an excess of phosphoric acid. It was exceedingly pleasant to take, so that it was very well adapted for children. He believed it to be more speedy in its operation than many other preparations of iron. It had been now prepared in the form of a syrup by Mr. Greenish, of 20, New-street, Dorset-square; which is much cheaper than that of the iodide of iron.

Case of Spontaneous Collapse of the Antrum. By White Cooper, Esq. This paper appeared as an original article in the April number of this Journal.

Anniversary Meeting, March 8, 1851.

J. Risdon Bennett, M.D., President, in the Chair.

The seventy-ninth annual meeting was held at the Albion Tavern, Aldersgate-street. Dr. Rowland delivered the oration.

Election of Office-Bearers. President. E. W. Murphy, M.D. Vice-Presidents. J. F. Clarke, Esq.; F. Hird, Esq.; E. Lankester, M.D.; Forbes Winslow, M.D. Treasurer, H. Hancock, Esq. Librarian. W. A. Harrison, Esq. Secretaries in Ordinary. C. H. F. Routh, M.D.; C. Cogswell, M.D. Foreign Secretary. T. Davidson, M.D. Councillors. G. Pilcher, Esq.; E. Headland, Esq.; W. C. Dendy, Esq.; J. Middleton, Esq.; S. Stedman, Esq.; S. W. J. Merriman, M.D.; W. Smiles, M.D.; F. Sibson, M.D., F.R.S.; J. R. Bennett, M.D.; H. H. Walton, Esq.; J. Gay, Esq.; T. Nunn, Esq.; A. B. Garrod, M.D.; R. Druitt, Esq.; J. S. Bushnan, M.D.; W. Coulson, Esq.; J. W. Woodfall, M.D.; A. P. Stewart, M.D.; J. H. Bennet, M.D.; E. J. Tilt, M.D. Orator for 1852. Edwin Canton, Esq.

MISCELLANEOUS INTELLIGENCE.

Professor Kölliker. This distinguished histologist last autumn paid a scientific and recreative visit to Holland and Great Britain, in company with Dr. Czermak. From time to time, he expressed his opinions of what he saw, with regard to the subject which he particularly studies, in four letters, dated respectively from Utrecht, Leyden, Edinburgh, and London, and addressed to Dr. Von Siebold, his colleague in the editorship of the *Zeitschrift für wissenschaftlichen Zoologie.*

In Utrecht, he appears to have derived great pleasure from his examinations of the labours of Harting, Schroeder van der Kolk, and Donders; and he concludes his first letter by observing, that "Utrecht is a soil where science flourishes so vigorously, that no attempt should be made to transplant it without careful consideration". The letter from Leyden contains an account of his visit to that place and to Amsterdam.

From Holland, Drs. Kölliker and Czermak passed over to Edinburgh, and visited the Highlands, though, as the author says, not with much profit to science, especially as they had lost the opportunity of exploring the sea off the west coast in company with Forbes and Goodsir. On their return to Edinburgh, they spent ten days with Professor Goodsir, and visited the museums and schools of anatomy in that city. Of Professors Syme, Christison, and Simpson, Dr. Kölliker says:—"In the hospital, we less admired the safety than the ease and elegance with which Syme operates. The first is found in Germany; but the latter are more rare. . . . . Christison does all credit to the great name which he has in Germany; he is highly estimable as a man, and is, perhaps, next to Simpson, the most popular physician in Edinburgh. Simpson is incontestably the first obstetrician in Great Britain; he cannot have many equals, and perhaps no superior." The experiments of Dr. Simpson on parturition in swine, after removal of a portion of the spinal cord, are referred to by Dr. Kölliker, who says that, as far as they go, they show that parturition is independent of the action of the cord. In returning from a visit to the Bass Rock, the travellers were reminded, at the village of Whitechapel, twenty miles from Edinburgh, of the state of the study of anatomy in Britain, about twenty years ago, by the ponderous masses of iron trellis-work, which were used to protect the graves in the churchyard from the resurrectionists.

After a visit to Glasgow, Drs. Kölliker and Czermak proceeded to London:

and Dr. K. speaks in terms of great satisfaction of the reception which he met with from Mr. Quekett, of the Royal College of Surgeons. His collection of microscopic objects he believes to be in no way inferior to Harting's in Holland, but even to surpass it. W. Bowman, Sharpey, Todd, Wharton Jones, Carpenter, Owen, and Paget, receive each a justly deserved tribute. With regard to the Hunterian Museum, Dr. Kölliker thinks that it ought to be made much more available for instruction than it is at present. "So large an institution", he says, "should also be a large school" for anatomical instruction. The Regent's Park Zoological Gardens, the British Museum, and the Museum of Economic Geology, were each visited; and the hippopotamus is honoured with a brief notice.

Dr. Kölliker seems to have expressed his honest opinion of the state of anatomical knowledge in the places which he visited, and of the anatomists with whom he came in connexion. British *savants* and practitioners may well feel gratified and encouraged by the tribute which he pays to their industry and knowledge.

APPOINTMENTS.

Allen, Thomas, Esq., elected Assistant Medical Officer to the County Lunatic Asylum, Gloucester.

Bateman, Frederic, M.D., elected House-Surgeon to the Norfolk and Norwich Hospital.

Canton, Edwin, Esq., appointed Lecturer on Anatomy at Charing Cross Hospital, in the room of Francis Hird, Esq.

Chalmers, David, Esq., elected Honorary Assistant-Surgeon to the Northern Hospital, Liverpool.

Fletcher, E. A., Esq., Surgeon, elected Coroner of the Borough of Walsall.

Hird, Francis, Esq., appointed Lecturer on Physiology at Charing Cross Hospital, in the room of T. Wharton Jones, Esq., resigned.

Hooper, Dr. R. L., appointed Physician to the Surrey Dispensary, in the room of Dr. Birkett, resigned.

Jackson, Thomas Carr, Esq., appointed Assistant-Surgeon to the Royal Free Hospital.

Johnstone, Dr. James, Senior Physician to the General Hospital, Birmingham, appointed Joint Professor of Medicine in Queen's College.

Smith, Dr. Edward, appointed Lecturer on Botany at the Charing Cross Hospital.

Spence, Dr., appointed Assistant to the Superintendent of the Army Medical Department.

Wright, Dr. Samuel, Physician to the General Hospital, Birmingham, appointed Joint Professor of Therapeutics in Queen's College.

OBITUARY.

Smith, Henry, Esq., late of Torrington Square, at Kensington, on 18th April.

BOOKS RECEIVED.

Crosse (J. G.) Midwifery Cases. Edited by Dr. Copeman. London and Norwich: 1851. Curling on Diseases of the Rectum. London: 1851. Emeritus, Letter to Sir G. Grey on Medical Registration. London: 1851. Lever (J. C. W.) Annual Address delivered before the Hunterian Society of London. London: 1851. Prescribers' Pharmacopœia. New Edition. London: 1851. Translation of Pharmacopœia Londinensis. By a Physician. London: 1851. Tufnell (Jolliffe) on Treatment of Aneurism by Compression. Dublin: 1851. Ziegler (G. J.) Inaugural Essay on Zoo-adynamia. Philadelphia: 1850.

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ORIGINAL COMMUNICATIONS.

ON THE CAUSES, CONSEQUENCES, AND TREATMENT OF INFLAMMATION OF THE VEINS.

By HENRY LEE, Esq., F.R.C.S.Eng., Assistant-Surgeon to King's College Hospital, etc.

In the numbers of the London Journal of Medicine for March and July 1850,[1] I have attempted to establish the following points, in reference to the Pathology and Treatment of Inflammation of the Veins.

1st. That inflammation, both of the veins and of the capillary vessels, usually depends upon irritation, communicated to them through their contents.

2ndly. That pus is capable of producing such irritation when detained in contact with the lining membrane of the veins; but that it may be conveyed along their channels, without leaving any trace of its passage.

3rdly. That pus, under ordinary circumstances, cannot circulate in living vessels, in consequence of its power of determining the coagulation of the first portions of the blood with which it is brought in contact.

4thly. That when pus is carried along a vein, it is in consequence either of the disturbance of the coagulum which has first detained it, or of the blood having in some measure lost its natural power of coagulation.

5thly. That when, in consequence of either of these conditions, pus does find its way into the circulation, it may nevertheless determine the coagulation of the blood in its passage, either in a different part of the same vessel, or in distant parts of the system.

6thly. That when the coagulation occurs in a distant part of the body, it is usually observed in capillary vessels.

[1] Mr. Lee's valuable Essay has been published in a separate form by Mr. Renshaw. Ed. Lond. Journ. of Med.

7thly. That when it occurs in a large vein, it may affect the circulation through the whole of the vessels which supply it; and that if, for example, a coagulum be formed in, or extend to, the common iliac vein, the obstruction produced may give rise to all the symptoms of *phlegmasia dolens.*

8thly. That, under any of the circumstances above mentioned, bleeding and the use of mercurial medicines are of at least doubtful efficacy.

The evidence upon which these propositions are established it is unnecessary to recapitulate. It will rather be my object at present to review some of the labours of physiologists in connection with this subject, and to endeavour, by the assistance of the information derived from the action of foreign substances on the blood, to reconcile the discordant evidence which is found in their writings.

The direct action of foreign matter upon the blood opens an extensive and hitherto comparatively unexplored field of observation to the physiologist; while the admission of diseased secretions into the circulation affords an equally extensive and interesting sphere of study to the pathologist.

The direct effects of extraneous matters, when introduced into the circulation, may be divided into four principal classes, namely:—

I. Those which are occasioned by simple irritation as the foreign substance passes through the vessels.

II. Those which result from the particles of the matter introduced being of such a size, as to pass with difficulty through the small tubes, in which they consequently become entangled.

III. Those which are the result of the coagulation of the blood, determined by the presence of foreign matter.

IV. Those which depend upon a disposition communicated to the blood, to separate into its different parts, or to decompose.

I. Dr. Hales has left us the following experiment. He introduced a tube into the aorta of a living animal, and filled it with a column of water, which by its pressure would inject all the branches with a force supposed to be equal to that of the heart. He then cut a knuckle of intestine, so as to divide the small branches in the length of the intestine, on its free margin. The water from the tube was found to pass from the cut vessels in forty-six seconds, while, under the same circumstances, brandy took sixty-eight seconds before it found its way through the divided vessels. On a second trial, the brandy took seventy-two seconds in its transit.

By the same mode of experimenting, Dr. Hales found that warm water, of the temperature of the animal, passed much quicker than cold water from the pump. He thence concluded, that the contents of the vessels are capable of exciting them so as to contract their calibre, and to diminish the velocity with which fluids are circulated. Mechanical irritation may likewise, as proved by microscopical observation, cause the capillaries of a part to contract, so as to impede the flow of blood through them.

II. In the Museum of St. George's Hospital are preserved different portions of the femoral vein of a man, who was admitted into the hospital in consequence of a severe attack of erysipelas, which produced

several abscesses in the leg and thigh. "The femoral vein is filled with coagula of blood which had manifestly formed before death; and in some parts of the centre of the coagulum, there was found a light semi-fluid substance somewhat resembling pus, but which appeared to be only the dissolution of the coagulum."

It is evident, in such a case, that, whatever may have been the nature of the semi-fluid substance, it was retained in its position by the coagula which surrounded it; and had these been removed, it would then have had free access to the circulation. It is also more than probable that the particles, of which it was composed, were much larger than the blood corpuscles, and would consequently have met with a mechanical obstruction, had they been conveyed in the course of the circulation.

The following case illustrates the circumstance before insisted upon, viz.: the ready access that such vitiated fluids may have to the circulating system, when the coagulating power of the blood has, by disease or other causes, been impaired.

Case xli.[1] Wm. Stubbs, æt. 30, of a swarthy complexion and emaciated appearance, was admitted into St. George's Hospital, Dec. 25, 1844. A year previously he had suffered from pain in the head and nausea. Three months before his admission, the pain in the head had become very severe, and was accompanied by frequent rigors, occasional vomiting, pain in the epigastrium, and region of the heart. The throbbing pain in the head was occasionally so severe, that he would frequently say that "all the disease was in the head".

He continued in the same state, with occasional rigors, till the 31st, when he vomited incessantly.

A soft pulpy tumor on the neck now attracted attention, which he said had existed since the beginning of October, when the previous symptoms had become so much aggravated. It was of the size of a small walnut, situated immediately over the carotid artery; pulsating, but not expanding with impulse.

He sank into the semi-comatose state, and died January 9th 1845.

This tumor,[2] upon examination, was found to be a small, perfectly circumscribed abscess, bounded on all sides by condensed cellular tissue. It contained a darkish coloured pus, and corresponded to the middle of the jugular vein. The cavity of the abscess here communicated with the vein by an opening of the size of a pea, and a probe could be passed through the opening into the cavity of the vessel. When first examined, the opening was partly blocked up by a thin coagulum. The internal coat of the vein presented its usual smooth and polished surface, and was but slightly discoloured, except in the neighbourhood of the opening. Here it was somewhat injected, and presented some yellow spots, apparently of pus, on the surface of the inner membrane. The outer covering of the vein was in this situation thickened and partially destroyed; the vein itself contained no blood.

A very small loose clot, presenting anything but the appearance of

[1] The Cases and Experiments are numbered in continuation of those related in my papers published in the London Journal of Medicine for March and July 1850.

[2] The *post-mortem* examination was conducted by Mr. P. Hewett.

blood, was found in the right auricle. It was of a brown rusty colour, mixed with streaks of a yellow hue. Examined by the microscope by Dr. Bence Jones, it was found to contain a remarkably small quantity of blood globules; but there existed a great number of large granular cells, the microscopic characters of which did not identify their nature.

It is remarkable in this case, that, although the contents of the abscess must from time to time have partially emptied themselves into the vein, yet, not being detained in it, they had excited little or no irritation.

The mode in which purulent fluid, when mixed with circulating blood, becomes altered in its characters, also deserves attention.

The coagulating power of the blood had evidently in this case been greatly impaired; and this circumstance can alone account for the ready admission which the pus gained to the circulation. On the other hand, how completely a coagulum will circumscribe purulent matter before the blood has lost its coagulating power, is illustrated by a case mentioned by Hunter,[1] in which an abscess formed in the substance of the left ventricle of the heart. "The inner wall of the abscess was formed, in this instance, by a solid coagulum of blood of an oval figure. This coagulum was of old standing, from its appearance, and was firmly entangled in the fasciculi of the ventricle."

Experiments illustrating the effects of the introduction of substances into the blood, which have afforded a mechanical impediment to the circulation, have been but too frequently repeated. The following are among those performed by M. Gaspard.

Experiment xxi. Half a drachm of liquid mercury, in half an ounce of common water, was injected into the saphena vein of a middling-sized dog. The animal, at first, experienced no inconvenience from the operation; but six hours afterwards the respiration became embarrassed, accompanied by fever, symptoms of pain in the chest, and disinclination for food. On the third day the animal appeared slightly relieved, and the appetite was returning when he was killed, fifty hours after the injection.

Post-mortem Appearances. Nearly the whole of the mercury was found to have lodged in the lungs, which were inflamed in hardened circumscribed patches, and in some places hepatised. The mercury escaped from the indurated tissue when it was divided.

Experiment xxii. Twenty-two grains of fluid mercury were injected into the jugular vein of a little dog by means of a glass tube. At the expiration of some days, there was a frequent dry cough, with occasional shiverings.

Post-mortem Appearances. The mercury was found, after death, in the lungs, which were inflamed in indurated patches in different parts.

Experiment xxiii. Twenty-two grains of mercury were injected into the jugular vein of a large dog.

Post-mortem Appearances. Four days afterwards, the mercury was found detained in the lungs, in about thirty inflamed spots of induration, varying in size from a pea to a filbert. In some of these suppuration had commenced.

Experiment xxiv. Two drachms of mercury were introduced into the jugular vein of a very large dog. Six hours afterwards, the animal

[1] Pathological Catalogue of Coll. of Surg., vol. ii, p. 4, from M.S. Cat.

refused his food, became feverish, and presented the usual symptoms of inflammation of the lungs; subsequently he appeared better, the appetite returned, and a very frequent cough was the only remaining prominent symptom. On the ninth day, a number of globules appeared in the fecal matter, and continued to pass till the thirteenth day, after which they disappeared. The animal's health was now in some measure restored, when he was killed.

Post-mortem Appearances. The lungs were found much altered by inflammation, adherent to the pleura, and solidified; they contained a great number of indurated tumours, filled with pus and mercury. No mercury was found in the other organs, with the exception of a few grains in the pleura, and in the liver. The stomach and the intestines contained a considerable quantity, but none could be detected in the vessels of those parts; some was, however, met with in the œsophagus, in the trachea, and in the bronchi. These last also contained some *débris* of the pulmonary tissue. The presence of the mercury in the liver is attributed by M. Gaspard, in this case, to its having regurgitated from the right cavity of the heart into the inferior vena cava, and having thence gravitated into the venæ cavæ hepaticæ.

These experiments are in accordance with that of Clayton, who, having injected mercury into the jugular vein, found it again four months afterwards in an abscess in the lung.

From all these cases it appears, that liquid mercury cannot circulate in the living vessels, because it becomes mechanically stopped in the capillary system of the lungs, where it impedes the circulation, and causes inflammation and suppuration. It has been asserted, that the abscesses thus found differ in their characters from secondary abscesses, arising from purulent infection. The difference, however, as we shall hereafter see, arises simply from the fact of a larger number of capillaries being obstructed at once (in consequence of the tendency of the blood to coagulate) in the latter than in the former case.

Experiments Nos. XVI and XVII, before recited,[1] show that where mercury is introduced through one of the branches of the aorta, the terminal vessels are affected in the same way as when it is carried along the pulmonary artery. The first system of capillaries to which the foreign matter is sent, is that in which, and in which alone, in these instances, the inflammatory symptoms are developed.

The same principle may be illustrated with regard to the portal circulation. If fluid mercury is injected into one of the mesenteric veins, it is arrested in its progress in the capillary system of the liver, where each globule of mercury becomes the centre of a small patch of congestion, which terminates in suppuration. In all the cases now mentioned, it certainly does not appear to be the size of the globules which prevents the passage of the fluid through the capillary tubes; for, even in the dead body, these may be perfectly injected with mercury. Another explanation must therefore be sought for, and one presents itself which appears to throw considerable light upon this question. If fluid mercury be agitated with recently drawn blood, it will have little effect in coagulating it *en masse*, but some of

[1] London Journal of Medicine, March 1850, vol. ii, pp. 237-8.

the globules of the mercury become very firmly attached to small portions of fibrine, and the two will be found to adhere very firmly together. In this experiment, the fibrine of the blood is no doubt separated to a certain extent from its other parts (as it would be if beaten with a twig), and adheres to the foreign substance with which it is brought in contact. May we not suppose that something of the same kind takes place in the living vessels,—that, as the globules of mercury are shaken with the blood, the latter parts with some of its fibrine, which adhering to the former, prevents it from being carried forward in the course of circulation?

Impalpable powders, when suspended in water and introduced into the blood, are likewise mechanically arrested by the first capillary system to which they are sent. Oily and viscid fluids, as illustrated in the following experiments, are also unable to pass through the minute tubes of the different organs of the body.

Experiment xxiv. A full half-ounce of chicken's fat, refined and melted, was injected into the jugular vein of a very large dog. The animal was immediately affected with extreme dyspnœa, faintness, and prostration of strength, accompanied by a very slow pulse and inability to stand. An hour afterwards, there were fever, shiverings, symptoms of pain in the chest, and a frequent pulse. These symptoms continued during the second day; and on the third, the animal was enabled to get up and to walk, although with a very unsteady motion. On the second day, the excrements were soft, yellow, pultaceous, and oily; similar evacuations also occurred on the fourth day, after which they were not observed. On the sixth day, the animal was convalescent.

Experiment xxv. Some mercurial ointment was injected two days afterwards into the opposite jugular vein of the same dog; the quantity employed was about a fourth part of that used in the last experiment. There was immediate prostration of strength; the body was rendered immoveable, and the pulse was reduced to twenty-four beats in the minute. The respiration became very slow and short. An hour afterwards, the pulse rose to thirty, and the respiration became more free. Extreme dyspnœa, however, followed, and the animal died an hour and a half after the injection of the ointment.

Post-mortem Apprearances. The lungs were found inflamed and hepatised from the former experiment. The branches of the pulmonary artery were obstructed with a dark concrete fibrous and elastic clot. This had moulded itself to the branches of the pulmonary artery, and followed its ramifications.

Experiment xxvi. Three drachms of olive oil, warmed, were injected into the jugular vein of a fox. As in the former experiments, there was complete loss of power; the respiration was interfered with, and the pulse faltered. The animal died at the expiration of twenty minutes.

Post-mortem Appearances. The body was examined four hours afterwards. Some bloody fluid was contained in the bronchi; the venous system, the right cavities of the heart, and the lungs, were greatly gorged with blood. The pulmonary tissue, for the most part, no longer crepitated upon pressure, and portions of it sank when

placed in water. Some drops of oil could be distinguished exuding from its structure, which left an oily feeling upon the fingers.

A considerable difference of opinion appears to have existed respecting the effect of the introduction of milk into the veins. Hunter found that the injection of milk into the veins of a dog proved fatal; while M. Gaspard affirms that as much as six drachms may be made to pass into the circulation, without in any way interfering with the animal functions. In trying the effect of milk upon recently-drawn blood, I find that, if the milk is fresh, it tends to retard the coagulation of the blood; but if it is sour, it promotes it in a very marked degree. It is not improbable, that this circumstance may account for the different effects which have been observed by different physiologists upon this point, and may reconcile the discordant evidence which they have left us.

Experiment xxvii. A grain and a half of corrosive sublimate, dissolved in water, were injected into the veins of a middling-sized bitch. This was followed by a kind of dysentery, and vomiting of sanious jelly-like matter. From time to time, there was great increase in the secretion of saliva; symptoms of inflammation of the lungs supervened, and death occurred three days afterwards.

Post-mortem Appearances. On opening the body, the rectum was found much inflamed, the liver dark-coloured, and the gall-bladder full of thick viscid black bile. The lungs were studded with a number of little abscesses, separated from each other by nearly healthy pulmonary tissue.

Experiment xxviii. A grain of corrosive sublimate introduced into the jugular vein was soon followed by increased secretion of saliva, dyspnœa, and symptoms of inflammation of the lungs. Death occurred on the fourth day.

Post-mortem Appearances. Scattered through the lungs were found very dark tumours, varying in size from a pea to a filbert. Some of these were inflamed, some had suppurated, while others were gangrenous. The liver was dark, and soft in structure; the gall-bladder full of black, thick, and viscid bile.

In repeating this experiment with five grains of the salt, dissolved in an ounce and of half a distilled water, the animal died in a few seconds.

In these last experiments, we find that the foreign matter is not confined in its influence to the first system of capillaries to which it is conveyed. There is a disposition manifested to expend its morbid action on the liver and the mucous membrane of the intestines—a disposition which we shall find still farther developed in the fourth class of cases above mentioned.

(To be continued.)

ON THE PATHOLOGY AND TREATMENT OF PUERPERAL INSANITY:

ESPECIALLY IN REFERENCE TO ITS RELATION TO ANÆMIA.

By F. W. MACKENZIE, M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

The pathology of Puerperal Insanity, and its relation to morbid conditions of the organism, are still involved in much obscurity, notwithstanding all that has been written upon the subject. Indeed, on referring to the writings of the most eminent obstetricians, it will be found that much diversity of opinion prevails in regard to it; and it would be as difficult to deduce from them a satisfactory theory of the disease, as a sound and efficient system of treatment. It must, however, be admitted, that many difficulties present themselves in the investigation of the subject, independently of such as are of a metaphysical nature. In many cases, the advent of the disease is so sudden, and its effects upon the sensorial functions so marked, that the patient is rapidly bereft of reason, and with it, of the power of expressing her feelings, or the causes which may have led to the attack. It frequently happens, that the obstetric attendant is called upon to attend his parturient patient without any knowledge of her previous state of health or predisposition to disease, and thus is unable to appreciate the circumstances, which may have remotely and principally led to the attack. Lastly, in regard to the malady in question, it is admitted that any individual experience must be limited, and therefore not such as to justify very sweeping conclusions, either as to its origin, pathology, or treatment.

From these and other causes which might be mentioned, there is often much difficulty in arriving at correct views respecting the nature of this disease, and the writings of even acknowledged authorities contain very contradictory doctrines in regard to it. It has been attributed, for instance, "to the suppression of the lochia"; to a "metastasis of the milk"; to a "peculiar condition of the sexual system which occurs after delivery"; to "local irritation of the mammæ, uterus, and other parts"; to the "disturbances of the vascular system occasioned by delivery"; to the "combined effects of irritation and loss of blood"; to "nervous irritability and excitement", etc. These circumstances, however, would appear to give a too partial explanation of its origin; for whilst they are almost constant and universal in their operation, the disease in question is admitted to be comparatively rare.

On the other hand, that some special predisposition must exist in those who are attacked by it, is, I think, sufficiently certain from a variety of circumstances. Its occurrence, as has been stated, is comparatively rare. The causes which ordinarily induce it, will, in many instances, fail to do so; and it is often met with, without the intervention of any applicable exciting causes. Now the circumstances in which this predisposition originates, would appear to have been but little attended to. Hereditary tendencies and a highly nervous temperament have been recognised as the most important; and most writers agree in connecting it with an adynamic state of the constitution. This view was

especially enforced by Dr. Gooch, to whom we are indebted for a most philosophical essay upon the subject, and who may be said to have been the first to delineate clearly the real character of the disease; but we have still to be informed of the causes of this adynamia. Where hæmorrhage has occurred subsequently to labour, or blood-letting has been practised, as also where long-continued suckling has preceded the attack, the causes of it are sufficiently obvious; but it is met with in many instances irrespectively of these, and, indeed, in the absence of any exciting cause whatever. To what then is it attributable? I have made many inquiries on the subject, and they lead me to believe that in these, and indeed in the majority of cases in which puerperal insanity occurs, it is mainly dependent upon the existence of anæmia antecedently to labour. In every case which I have attended, such an inference has been clearly deducible from the history; and on looking to the published cases of others, this opinion is supported, if not confirmed. I propose, therefore, to draw attention to this point in the present paper, and to inquire how far such an opinion is verifiable, and in accordance with well-ascertained facts.

It is unquestionably a fact, that anæmia, in various degrees, prevails very generally amongst females, and that its existence is often unrecognised both by the patient and her friends; whilst, at the same time, its influence is very considerable in modifying and predisposing to various secondary diseases. The great susceptibility of the nervous system in females generally, both consequent upon, and independently of, impregnation and its results, is well known; but its connexion with certain conditions of the blood does not appear to have been as fully appreciated. It has been observed, for instance, that the nervous system of the female in health is far more irritable and susceptible to impression than that of the male; but it is also the case, that the healthy constitution of the blood of the former differs materially from that of the latter, and that, with a slight exception in favour of albumen, the blood of the female contains a smaller proportion of nutritive and vivifying elements than that of the male.[1]

The avocations of females in many instances, their education and modes of life, more especially of those of the upper classes of society, doubtless tend still further to diminish this proportion, and to produce a correspondingly more irritable condition of the nervous system, as well as a greater susceptibility to the operation of disturbing causes. Anæmia, however, when slowly induced, and existing even in an extreme degree, is not incompatible with a comparatively healthy performance of the bodily functions, and thus may have been of long continuance without attracting any particular notice; but persons so

[1] I subjoin the following table from Dr. Carpenter's Physiology, embodying the general results of the analysis of Denis on this point.

	Male.		Female.	
	Maximum.	Minimum.	Maximum.	Minimum.
Water	805	732	848	753
Albumen....	63	48·5	68	50
Globules....	186	110·5	167	71·4
Fibrin	4	·2	3·1	2

suffering readily succumb to morbid influences; they are unequal to much fatigue, possess, for the most part, but little energy, and are often incapable of performing their allotted and ordinary duties. Should impregnation take place under these circumstances, the blood becomes still further impoverished, and the constitutional powers heavily taxed in the performance of the functions necessary for the purpose of "forming, lodging, expelling, and feeding the offspring." If secondary disease has hitherto been averted, there is now a greater probability of its supervening, and hence, during utero-gestation, various functional disorders are liable to occur. The brain and nervous system in particular become unduly excitable, and, in some cases, incapable of withstanding the shock and the consequences of labour. Hence it is, that intense cerebral disturbance, consequent upon great nervous irritability, is so liable to occur under such circumstances, with or without the supervention of some casual exciting cause.

On reviewing the symptoms which ordinarily characterise an attack of puerperal insanity, we see nothing that is inconsistent with the view which has been expressed. The progress and termination of the malady do not militate against it, nor do the *post-mortem* appearances in such cases as have terminated fatally. I shall briefly refer to each of these points, as elucidating the pathology of the disease; and commence with the symptoms, which I shall cursorily describe as they have presented themselves to me in practice.

Symptoms. When mania occurs during the puerperal state, its accession is in some instances sudden, as where some violent mental emotion has been the exciting cause; but more frequently it is otherwise, and it is ushered in by certain premonitory symptoms. Of these, one of the most frequent is restlessness or sleeplessness at night, a symptom which almost invariably precedes the full development of the disease. The patient at the same time is often excitable during the day, and evinces some peculiarity or other. She may express herself as feeling unusually happy, or otherwise; there may be a degree of vivacity about her which is unaccustomed; or, on the other hand, she may be excessively reserved. One patient will be constantly talking, while another will be sullen and taciturn, and there is often some strange fancy or idea upon which she more particularly dwells. The pulse at this time is generally quick; but it is weak and easy of compression, and although the head may be hot and the countenance flushed, the extremities, and especially the feet and hands, are either cold or below the average temperature. Up to this period, the patient appears to be rather eccentric than mad; she is easily managed, and readily does what she is advised; but after a time she becomes more positive, more impatient of contradiction, and at length violent and unruly. Her nights are now passed without any sleep, her countenance is flushed and excited, her head hot, and her eyes suffused. The tongue is mostly furred and dry, but it may be clean or covered with a slimy mucus; the breath is often offensive, more especially in the morning; the bowels are torpid, the stools unhealthy, and the urine scanty. With the development of these symptoms the delirium rapidly increases, and the case, so far as the cerebral disorder is concerned, presents very little difference from that of ordinary mania. The state of the circu-

lation is, however, still peculiar; the pulse continues weak, though quick; the extremities are cold and clammy; the inner lips are pallid; and the patient, unless under the excitement of delirium, appears to suffer from extreme prostration.

These symptoms, it will be observed, do not materially differ from the cerebral disorders which are sometimes met with in anæmiated persons, when causes of sufficient intensity disturb the sensorial functions; and although such cases must have occurred in the experience of most practitioners, I will briefly quote the following in illustration.

Case. On the 23rd of November 1843, I visited Elizabeth Waugh, a girl aged 14, who, shortly after receiving a fright, had exhibited symptoms of excitement and cerebral disturbance. She had been delirious for some days before I saw her, and had been under the care of a practitioner, who, in consequence of the heat of head, flushing of the face, quick pulse, and the delirious state of the patient, had treated the case as one of mild phrenitis. The head had been shaved, cold lotions applied, and purgatives and antimonials administered. Under this treatment, however, the symptoms rather increased than lessened in severity; and on visiting her, I found her suffering from many of those which I have mentioned as occurring in puerperal mania. The pulse indeed was quick, but very weak; the head was hot, but the extremities were cold; the face was flushed, but the inner lips were pallid, and there was evidently much physical prostration, whatever might be the nature of the cerebral disorder. These circumstances, together with the effect of the past treatment, led me to consider whether the case might not be one of irritation rather than of inflammation, and her previous history left no doubt on my mind as to its being so. She had been a remarkably weakly, ailing child from infancy; had lost her father and mother at an early age, and at one time had been so destitute, and so little provided for, that she had been placed temporarily in an asylum by a clergyman; she had left this some months before the present attack commenced, but it was observed by those who had the charge of her, that she had been, previously to leaving, very weak and pale, and incapable of undergoing fatigue. With this history, looking to the patient's general symptoms, and discovering a loud venous bruit in the neck, I did not hesitate to order a nutritious diet, and a moderate allowance of wine. The bowels were attended to, and the medicine specially prescribed was the carbonate of iron in rather full doses. Upon this treatment, in a week, she was much better; by the 7th of December she was convalescent; and on the 23rd I left her, not only cured of the cerebral affection, but much better in health than she had been for some time.

This case was in no respect dissimilar to those which I have seen of puerperal mania; in the latter, there has always been great cerebral excitement conjoined with much physical exhaustion, and for this there is often no sufficient cause to be found, either in the labour itself, or the circumstances which have followed it. If, however, the history of such cases be carefully investigated, the practitioner will generally find that anæmia, often in a marked form, had existed antecedently to labour.

The progress and termination of the puerperal attack vary in different cases. It may terminate in spontaneous recovery, a result

which will be hastened by judicious treatment. It may be followed by protracted insanity of many months or years duration; and in some instances it has terminated fatally. When such has been the case, the *post-mortem* appearances have been generally of a negative character as regards the existence of any active cerebral disease. Dr. Copland observes, "that those caused by pure or true puerperal insanity, particularly where it occurs soon after delivery, or during suckling, consist chiefly of deficiency of blood in the brain and its membranes; and in some instances, of slight effusions of serum between the membranes and in the ventricles. There are no signs of inflammation, or even of congestion, excepting in such cases as have approached in their character to phrenitis, on the one hand, or to nervous fever on the other. The pure cases of the malady present little beside anæmia of the brain and its membranes, and of the system generally."[1]

Dr. Gooch observed the following appearances in a case which terminated fatally. "The veins throughout the body were remarkably empty; the heart contained little blood; the lungs and liver were singularly pale; within the head there was the same deficiency of blood in the veins of the pia mater and in the sinuses; under the arachnoid there was a little serum; and, on slicing off the hemisphere, the bloody points were unusually numerous." Such appearances are probably those which would be met with in recent cases; but where the attack has been protracted or has merged into settled insanity, various organic changes will doubtless be found; indeed, the statistics of lunatic asylums show, that almost every form of organic lesion has been met with in the brain and its membranes in such protracted cases. These, however, are probably the consequence of secondary disease, or of the long continuance of great functional disorder.

But neither a fatal termination, nor evidence of congestion of the brain, with more or less serous effusion into the ventricles, or between the membranes after death, would render the opinion which has been expressed as to the origin of the disease either improbable or incorrect. Simple cases of anæmia, uncomplicated with the circumstances of the puerperal state, have terminated fatally after symptoms of great mental and cerebral excitement, and appearances similar to those stated have been found after death, when there was no evidence of the existence of inflammation during life.

Dr. C. J. B. Williams observes; "I have met with several cases more or less corresponding with the following description. A young female becomes anæmic, and after exhibiting various symptoms of feeble general circulation, with headache, drowsiness, and impaired sensorial functions, suddenly becomes worse; passes into a state of stupor, with dilated pupils, sometimes varied by slight *manifestations of delirium*, throbbing of the carotids, and partial heat of the head, and dies comatose.

"On opening the head, a small quantity of serum is found under the arachnoid, and in the ventricles, sometimes with a little lymph (in one case there was none). The vascularity of the membranes is remarkable; but the vessels most distended are the veins; and in the larger of these, and in the longitudinal sinus there is a firm coagulum. In

[1] Copland in Dictionary of Practical Medicine, Part vii, p. 547.

parts, especially at the torcular Herophili, this coagulum blocks the whole sinus, and exhibits a separation of fibrine; portions of which are softened down into that opaque purilaginous matter, which was long mistaken for pus, but which Mr. Gulliver has shown to be a mere disintegration of the fibrin, which mere stagnation, in a warm temperature, may effect. These have been taken for cases of meningitis. No doubt, inflammation may supervene in them occasionally; but in two cases, which have fallen under my notice, there was no adhesion of the arachnoid, nor deposit upon it, nor any other unequivocal mark of inflammatory action. Yet the fibrinous and bloody concretions in the veins and sinuses were most remarkable for their size and firmness. It appears to me most probable that these affections originate in the encephalic congestion connected with anæmia".[1]

In the foregoing description of the symptoms, I have not attempted to delineate the disease in all its several phases, or to indicate more than, very generally, its leading features and symptoms as I have most frequently met with it in practice. To enter into such details would answer no useful purpose, for in no two instances would the same train of symptoms be observed. It will present differences in individual cases according to the general state of the patient, the causes which have immediately excited it, and the temperament and peculiarities of the patient. In some instances the insanity will be attended with despondency, in others with hilarity, and it may vary from a mere hallucination upon a single point, to the most complete perversion of all thought and reason.

Pathology. A far more important question is involved in the consideration of the nature and pathology of the disease, and the determination of the physical condition upon which it principally depends. I have expressed the opinion that its origin is intimately connected with a defective condition of the blood; and this view, which has been suggested by the cases which I have attended, is strengthened by the histories of those which have been published by others. I would particularly refer to the paper of Dr. Gooch, on the "Disorders of the Mind in Lying-in Women"; in corroboration, to the cases which he has reported, and the inferences which he has drawn from them. After giving a careful history of them in detail, he adds a summary of them in the following words:—"What inferences are we to draw from the foregoing cases relative to the question, for the solution of which I have related them; viz., what is the morbid condition of organisation on which puerperal insanity depends? Let the reader reflect on the leading point in these cases. In No. 1 the disease occurred in a *pale lady, without any heat of skin*, or much quickness of pulse, and was not relieved by the loss of blood. In No. 3 it occurred in one whose constitution *was drained and enfeebled by nursing*. In No. 4 it occurred in a *pale* woman, habitually hysterical, subject to bear dead children *from want of power to afford them life* for nine months. In No. 5 it occurred in one who had *been drained by flooding*. In No. 6, in one whom, for urgent reasons, the *circulation had been reduced to the lowest ebb consistent with life*. In No. 7, in one who had been *living very low for a week*, with such marked symptoms of the irritation of debility,

[1] Williams (C. J. B., M.D.) Principles of Medicine. Second Edition, pp. 167-8.

that at first sight I thought it was the close of some disease that had been overlooked. It was speedily relieved; not by cupping and purging, but by the tranquillizing and sustaining power of opium. In No. 8 the disease was treated, though with all possible prudence and moderation, as an inflammatory state of the brain, by leeches, cupping, purging, and low diet, yet the patient died; not with symptoms of oppressed brain, but with those of exhaustion; and on examining the body, the whole venous system was found *extraordinarily empty of blood*. In No. 10 the patient fell, as if shot, under the stroke of the lancet; and, on examining the head, there was found no effusion, and *empty blood-vessels*. In No. 11 the disease came on after puerperal convulsions; a disease generally, but not always, depending on cerebral congestion; and after *one of those enormous bleedings*, commonly practised in these cases, and no morbid appearances were discovered after death in the brain".

Dr. Gooch then observes: "These cases, if fair specimens of puerperal insanity, lead straight to the conclusion, that the disease is not one of congestion or inflammation, but one of excitement without power".[1] Of the correctness of this conclusion there cannot, I apprehend, be a doubt. As far as it goes, it expresses fully the fact, but it leaves the principal difficulty unexplained. It fails to inform us of the circumstances upon which this excitement without power depends, and thus to enlighten us upon the real nature of the disease. It is clear, however, that another conclusion may be drawn from these cases. In all, the patients were more or less anæmiated prior to the attack. In some, this had followed hæmorrhage or blood-letting, but in others it was irrespective of either, and had probably existed long antecedently to labour.

The cases more recently reported by Drs. McClintock and Hardy, in their valuable work on *Midwifery and the Diseases incident to the Puerperal State*, are of the same general character, and justify a similar conclusion. The cases published by them amount altogether to six; of these, the attack followed blood-letting in four; in one it occurred in a person who had been living in a state of extreme destitution previously to her labour; and in the sixth it followed diarrhœa. In the following summary the principal facts of these cases are stated, so far as they bear upon the question under consideration.

In No. 1, the patient went on well until the fifth day after her labour, when she was bled on account of cough; on the sixth day the bleeding was repeated, and at nine o'clock, P.M., of the same day, she awoke screaming, and quite maniacal. The cerebral excitement was tranquillized by tartar emetic; but she subsequently became so weak and low that stimulants were necessary. After this she was attacked with erysipelas on the side of the head and face, and eventually died. A post-mortem examination revealed vascularity of the arachnoid, and about an ounce and a half of serum at the base of the brain. In No. 2, it occurred after bleeding for pain in the uterine region. The attack commenced on the evening of the same day of the bleeding; but it readily yielded to tartar emetic treatment. In No. 3, the patient fainted twice during labour. On the third day she was bled. This occasioned

[1] GOOCH, Dr. Diseases Peculiar to Women, Second Edition, pp. 139, 140.

a feeling of faintness, and was followed by mental disturbance. In No. 4, the patient was bled upon the second day after delivery, mania occurred on the fifth, and on the eighth it was very intense, but it was treated successfully with tartar emetic. In No. 5, the patient was an unfortunate woman who had been abandoned by her husband, and who, when admitted, was in a state of extreme poverty and destitution. In No. 6, the attack followed diarrhœa, for which low diet was ordered; it commenced about five days subsequently; the stomach and bowels were greatly disordered, but the patient eventually did well.

As I have already observed, the general character of these cases does not materially differ from those related by Dr. Gooch. In the fifth case, the patient could not have been otherwise than anæmiated previously to her labour. In the sixth case, the patient was in a state of extreme prostration before the attack commenced; and, judging from the results of bleeding in the four first, it is scarcely likely that any of the patients could have been in ordinary health before the commencement of labour. At all events, mania is not a usual consequence of blood-letting, when properly practised; and when depletion is followed by such a result, it at least justifies this inference, that whatever may have been the symptoms for which it was performed, the patients were more or less anæmiated prior to its performance.

A case is reported by Abercrombie under the head "Meningitis", in his work on the *Diseases of the Brain and Spinal Cord*, so much to the present purpose that I subjoin the following particulars of it. "A lady, aged 38, was recovering from her eleventh accouchement, when, for some local affection, repeated topical bleeding was practised. This, with other remedies, subdued her febrile symptoms; but after three or four weeks she was still confined to her bed, and considerably reduced in strength. At this time, she became one day alarmed and agitated by some family occurrence, and immediately began to talk wildly and incoherently, and, after a restless night, was found next day in a state of the highest excitement, talking incessantly, screaming and struggling, with a wild expression of countenance, and a small rapid pulse. She was treated by topical bleeding, laxatives, cold applications to the head, etc., but with little or no benefit; and on visiting her on the following day I found her sitting up in bed, with a look of extreme wildness; both her hands in constant motion, talking incessantly and wildly; and I learnt that she had not ceased talking for one instant for the last twelve hours. Her pulse was now rapid and feeble, and her countenance expressive of exhaustion. In consultation with a highly intelligent friend, who had charge of the case, I mentioned my experience of the fatal nature of the affection, and proposed to make trial of treatment by stimulants. A glass of wine was accordingly given, with evident abatement of the symptoms, and it was ordered to be repeated every hour. At the end of the fourth hour she was perfectly composed and rational, her pulse about 90, and of good strength, and from this time there was no return of the symptoms".[1] The state of health of this patient, antecedently to labour, is not mentioned; but the fact of her having had ten children previously,

[1] Abercrombie (John, M.D.) Pathological and Practical Researches on Diseases of the Brain and Spinal Cord, pp. 64-65.

would, I think, tend to show that her constitution and blood had been somewhat impaired; for nothing induces anæmia in females more certainly than having children very rapidly, and more especially when all are suckled by the mother. In this case anæmia had probably predisposed to the attack, in conjunction with the local blood-letting; this, however, does not appear to have been carried to any great extent, and, in a person not otherwise anæmiated, would scarcely have produced a state of constitution so favourable to the development of mental disorder.

The cases which have come under my own observation have appeared to be essentially similar to those related, and to have originated remotely, and principally, in a defective condition of the blood. In all, anæmia had existed concurrently with the attack, as well as antecedently to it. In one patient, with whose previous history I was well acquainted, it had existed during the greater part of pregnancy, and was probably the sole cause of the mania. In another it was apparent when the patient was suffering from the malady, which disappeared under treatment calculated to improve the general health. But it reappeared some months subsequently, not as the effect of child-bearing or its consequences, but as the result of a return of bad health, and an impoverished state of the blood. Many cases of this form of mania have been admitted, during the last three years, into the Paddington Infirmary, in females who had been suckling their children under circumstances of much privation; in all of them, anæmia existed in a marked manner, and the intensity of the cerebral disorder, as well as the danger, was found to be proportionate to the degree in which the blood had been impoverished. I shall subjoin the particulars of some which I have attended.

Case. The first I shall refer to is instructive, as showing the extreme intolerance of blood-letting in these cases, and is otherwise corroborative of the views which I have expressed. In November 1845, I went to Fulham to see a lady who had become deranged a few days after her confinement; but before I saw her she had been bled rather largely, on account, as her medical attendant stated, of her extreme excitement; *this, however, instead of having been lessened by the bleeding, had been much increased by it.* I found her sitting up in bed, raving incessantly, and she had been so for many hours. Her head was very hot, and her face suffused, but her inner lips were pale, her pulse weak and quick; the feet and hands cool, and the skin moist. No cause could be assigned for the attack. She had an easy labour, and it was neither attended by hæmorrhage nor any thing unusual. She had not experienced any mental shock or uneasiness subsequently; nor did the state of the tongue, or any thing else, indicate gastro-intestinal irritation. It was, however, evident that she was very much anæmiated, and her history clearly showed that anæmia had existed prior to labour. She had a very large family. She had suckled each of her children an unusual period; and the constant strain upon her constitution, induced by pregnancy and lactation, had evidently given rise to this insufficiency of blood. Sustaining and tranquillizing treatment was recommended; but the case was considered by her husband and friends to be so bad, that she was shortly removed to an asylum. I visited her there some weeks afterwards, but she was not then materially

better, and many months elapsed before she was deemed sufficiently convalescent to return to her family. I cannot doubt that this protracted convalescence was mainly attributable to blood-letting after the accession of the maniacal symptoms.

Case. In another case, the patient was attended by myself in labour, in Dec. 1843. This took place prematurely, and the child was still-born. No hæmorrhage occurred subsequently, or anything unusual, nor had she experienced any shock or mental emotion; and for a few days she appeared to be doing as well as it was possible. I had never attended her before this labour, and I knew nothing of her previous state of health; but she did not appear to be strong. She was pale and emaciated; and the labour appeared to have taken place prematurely as the result of bad health. Four days after her confinement she became delirious; and I found her talking very incoherently, and impressed with the idea that people were about her, endeavouring to destroy her. She had a wild unsettled look; her countenance was flushed, and her eyes suffused; her pulse was small and quick, and her extremities cool. No cause could be assigned for the attack, either mental or otherwise. Her tongue was clean, and her bowels had been regularly relieved.

The immediate treatment consisted in giving sixty drops of the tincture of henbane, applying ice to the head, and occasionally administering light nourishing food. A second dose of henbane was given, two hours after the first; and this procured some sleep, and she awoke more composed. On subsequently inquiring into the history of the case, the following particulars were elicited.

The patient had enjoyed good health, until five years previously. She then lost her mother; and, in consequence, suffered much mental distress and excitement. Nervous symptoms came on, which were supposed to arise from brain-fever; and she was in consequence very much lowered, and had a considerable quantity of blood abstracted. This treatment gave rise to increased nervous excitement, and also to mental derangement, which continued for some months; and ever since, she had been nervous and excitable. Such a history clearly pointed to the existence of anæmia, as a consequence of the lowering treatment and depletion; and I found, on examination, the indications of it in a decided form. There was a loud bruit over the veins of the neck; the inner surface of the lips was pale, as was also that of the eyelids; the pulse was weak, and her whole appearance indicated great deficiency of blood. The treatment adopted had reference to this, and to tranquillizing the nervous system. A nutritive diet was enjoined, with the moderate exhibition of steel, and occasional aperients: sedatives were given at bedtime, when restless or indisposed for sleep. Her general health improved; and in a fortnight she was convalescent.

A twelvemonth subsequently to this, I had again to see this patient, in consequence of symptoms of returning insanity; and I found her labouring under marked delusions. She was not now pregnant, neither had she been suckling; nor had any cause connected with child-bearing been in operation: nevertheless, it was evident that her intellect was disordered. She entertained strange and unfounded apprehensions, had sleepless nights, and many of the symptoms which had

characterised her previous attack of puerperal insanity. The only explanation which could be found for this, was the state of her general health, which had again become impaired. There was evidently anæmia, and with it a disordered condition of the stomach and digestive organs. These circumstances alone appeared to have given rise to the present attack; and it speedily disappeared on correcting them. Two years subsequently to this, she gave birth to a fine healthy child, which she suckled for some time, without any return of mental disorder.

For some years after this, she continued in the enjoyment of excellent health, mainly by taking great care, regular exercise, and attending rigidly to diet and regimen. Only six weeks ago, however, I was again consulted by her, on account of weakness and nervous symptoms. She passed sleepless nights, and had various odd and unnatural feelings. These I found to have been preceded, and to be attended, by anæmia and disorder of the stomach and bowels. She was speedily cured by measures suitable to these conditions.

We have, in this case, an instance of mental derangement occurring four times in one individual; and in each, chiefly as the consequence of anæmia. The first attack followed copious blood-letting and lowering treatment for nervous symptoms, which, although occasionally, do not invariably depend upon phrenitis. From this cause, she would appear to have been anæmiated at the time of her first confinement; and mania followed as the consequence of the shock of labour in a person so predisposed. In the two last attacks, the existence of anæmia was most marked, and had probably predisposed to them, whilst gastro-intestinal derangement was their immediate exciting cause.

In the following case, the point contended for was better established, inasmuch as the patient had been under my care for some time previously to labour; and the connexion between the anæmia antecedently, and puerperal mania subsequently to it, was clearly shewn.

Case. The patient was a young lady whom I had attended prior to her marriage, and whose illness then was principally dependent upon anæmia and gastro-intestinal derangement. She recovered from this, and shortly afterwards married. This event was soon followed by pregnancy; and, during gestation, the symptoms of anæmia returned in a severe form. Her feeling of prostration at times was excessive. She often fainted on assuming the erect position; became breathless on the least exertion; and palpitation of the heart was readily induced. Her face and lips were extremely pallid; her feet and hands were for the most part cold; and a loud continuous murmur was heard over the jugular veins. So severe were these symptoms towards the end of pregnancy, that it more than once became a question, as to whether premature labour ought not to be induced. By great care, however, by the frequent administration of nourishment to the extent that her digestive powers would permit, and by the use of steel tonics, she was enabled to reach the full period of gestation. Her labour was natural; and she was delivered of a fine boy, without any particular loss of blood, or any unusual circumstance occurring. Everything went on favourably for about five days, when she appeared to be somewhat odd in her manner. From being naturally reserved, she became exceedingly

talkative; her countenance excited; and she represented herself as feeling extraordinarily happy. Her nights had been more or less sleepless; and this sleeplessness now increased. Her mind became more and more disordered; and at length she was perfectly delirious. At the commencement of her attack, morphia was given largely; but it failed to do any good. The tartrate of antimony was then had recourse to; but it proved equally inefficacious. These remedies were therefore discontinued; and it was determined that the treatment should be solely addressed to the patient's general health, and more particularly the improvement of her blood. With this view, she was at once removed from town to a more healthy and open situation. Her apartment was kept freely ventilated; and she was supplied frequently with light unstimulating food. The drain upon her system, occasioned by lactation, was checked by the application of ice and cold evaporating lotions to the mammæ. The utmost tranquillity was maintained; and all sources of excitement, such as interviews with her husband and relatives, were interdicted. Under this treatment, and with the aid of very little medicine, her health soon began to improve, as did also the condition of the blood. As this took place, she slept at night without the aid of narcotics, and her mind became rational. In the course of three weeks she was perfectly convalescent, and has continued well ever since. Two years ago she was again confined, gave birth to a fine healthy child, and recovered without the return of an unfavourable symptom.

I might add other cases of a similar nature, justifying the same conclusion, if the limits of this paper would permit; but I forbear doing so, because it appears to me that sufficient has been said to show that there is a connexion between the existence of anæmia antecedently to labour, and the occurrence of mania subsequently, and that this connexion is more than casual. It has been said that puerperal insanity will occur under very different circumstances; and that stout persons, as well as those who are spare, are equally obnoxious to it. It must be remembered, however, that a stout adipose subject is not necessarily a healthy one; and that in such the blood may be, and constantly is, either impoverished or scanty. The existence of anæmia cannot be determined by the conformation of the patient. It is rather to be sought for in the pallid complexion, the paleness of the inner surface of the lips, and of the palpebral conjunctivæ; in the frequent palpitation of the heart, the breathlessness on exertion, the abnormal murmurs heard over the heart and jugular veins, the feebleness of the pulse, and the general coldness of the feet and hands: with these symptoms, there is often languor and lassitude, and general feebleness of the bodily functions. These are the surest indications of the presence of anæmia; and when they are sufficiently attended to, it will often be found to exist where otherwise it might never have been suspected.

That this condition of the blood should favour the occurrence of puerperal insanity, would appear to be highly probable, from a variety of circumstances. In the first place, it is obvious that for the healthy performance of the functions of the brain, as of other organs, it is necessary that there should be a due supply of healthy arterial blood; and that this supply cannot be greatly diminished in quantity, or de-

terioriated in quality, without producing disorder, or a great susceptibility to it. "That the brain is an organ receiving a very great supply of blood; that its vessels are large and numerous; that an increased determination of blood to it, or, on the contrary, a diminution of the quantity conveyed to it, must have an effect upon the cerebral functions; and that the perfect or imperfect state of the intellectual and nervous powers is intimately dependent upon the condition of the circulation within the head, are facts of which no doubt can be entertained.[1] Hence, amongst the frequent consequences of anæmia, may be mentioned an extremely irritable condition of the brain and nervous system. In some cases, this amounts to actual disorder; in others, to a susceptibility, which only requires some casual circumstance to develope into positive disease. Thus, in puerperal patients, when greatly anæmiated, mania may occur as the result of the mere shock and consequences of labour. But when the blood is less impoverished, additional disturbing causes may be necessary; and those which would produce it in a puerperal patient, are similar to those which would occasion it in the non-puerperal state. Of these, mental agitation, shock, or emotion, loss of blood, and irritations of various organs reflected upon the sensorium, particularly of the stomach, liver, and intestines, are the most potential; and the cerebral disorder induced by these in anæmiated non-puerperal persons, is precisely similar to the mania of the puerperal state.

In the second place, the general symptoms attending puerperal mania, are identical with those which are met with in anæmia. The brain and nervous system, it is true, are in a state of extreme excitement; but the condition of the patient generally is one of weakness and exhaustion. The pulse is small and quick; the extremities cold; and the excitement has been truly characterised as "action without power". Moreover, in all the cases which I have seen, loud continuous murmurs were heard over the cervical veins, as well as those cardiac sounds, which are indicative of an attenuated state of the blood.

In the third place, the progress of the disease does not materially differ from various cerebral affections, which are occasionally met with in anæmiated patients; and whilst in each the tendency under favourable circumstances is to recovery, in either the reverse may happen from very similar causes. Thus, in either, congestion of the brain may occur from feebleness or irregularity of the circulation; and, consequent upon this, effusion may take place, leading to a fatal termination. When, again, the malady is protracted, various organic changes may be induced in the brain and its membranes; and these may give rise to permanent insanity, epilepsy, or paralysis.

Treatment. The treatment generally proper for anæmia will be found, upon the whole, to be most appropriate for puerperal insanity. Special indications will require to be fulfilled by special means; and slight forms of the disease will often yield to the unassisted efforts of nature. But when the attack is severe, and resists the natural efforts, as well as specific treatment, it will generally be found that this obstinacy is connected with an aggravated form of anæmia, and

[1] Mason Good. Study of Medicine. Edited by Samuel Cooper. Note by Editor. Vol. iii, p. 61.

that, in proportion as the condition of the blood is improved, will the cerebral disorder disappear.

If the foregoing observations should prove to be correct, and if it should be established as a fact that anæmiated persons are especially predisposed to puerperal insanity, it will follow that the treatment should not only be curative, but preventive. The practitioner, aware of the cases in which there exists a predisposition to the malady, will be forewarned, and prepared to take precautions against its accession. During pregnancy, he will endeavour to improve the condition of the blood and the tone of the nervous system, by attention to diet and regimen, and such auxiliary treatment as may be indicated in particular cases. During labour he will especially endeavour to diminish the shock upon the nervous system, and to prevent or lessen excessive or immoderate hæmorrhage; whilst, during the puerperal period, he will rigidly guard his patient against the influence of those occasional causes, which are known to determine the attack, such as mental alarm, agitation, or emotion, gastric, hepatic, or intestinal irritation, or any organic irritation which is capable of being reflected upon the brain. In short, the indications are two fold; on the one hand, to adopt such measures during pregnancy as are calculated to improve the blood; on the other, to guard the patient, both during and subsequently to labour, against such influences, mental and physical, as have been known to occasion the attack.

The first indication comprises the treatment of anæmia in all its several forms,—a subject which is far too comprehensive and extensive for discussion in the present paper. Its relations, moreover, to uterine and puerperal diseases generally are so important, that I propose to consider it in a separate communication. It should comprehend attention to external circumstances,—habits and modes of life; to the condition of the digestive organs, as well as that of the nervous system generally; to various remote causes of a depressing character, mental and corporeal; and thus should comprise measures both moral and physical, dietetic and medicinal.

The second indication, so far as prevention is concerned, is to protect the patient, both during and subsequently to labour, against the influence of the exciting causes of the malady. These are, for the most part, well ascertained, and comprehend two classes. The first class comprises those which directly operate upon the mind; the second, such irritative disorders of the body, or of particular organs, as are capable of affecting the brain unfavourably, whether by sympathy or otherwise. All painful states of mind should, if possible, be prevented: distress, anxiety, grief, or any emotion, have, in some instances, immediately given rise to an attack of mania; as also have fright, agitation, sudden shock, or alarm. These also should therefore be rigidly guarded against. Of bodily derangements, it may be said, that any "uncommon irritation spreading to the brain", may be the exciting cause; but certain organs sympathise more directly with it than others, and the disorder of these is especially to be attended to. Such irritative disorders may be enumerated in the following order, as regards their frequency, in the causation of the disease: gastric, hepatic, or intestinal, either singly or combined; uterine, and mammary.

The curative treatment of puerperal insanity, should it unfortunately

have occurred, is one of extreme difficulty;—not less so from the nature of the indications to be fulfilled, than from the reluctance of the patient to acquiesce in the necessary measures of treatment. It should comprise attention to at least the following four points:

First. The removal of any exciting causes which may exist, and of any bodily derangement which may have been instrumental in the causation of the disease.

Secondly. The subduction of cerebral excitement, and the restoration of tranquillity to the nervous system generally.

Thirdly. Guarding against the occurrence of congestion, effusion, or other disease of the brain.

Fourthly. Supporting the constitutional powers, restoring the general health, and improving the condition of the blood.

I. The first indication points to the removal of such exciting causes as may have been concerned in the production of the disease. It has been remarked, that these are referrible to two heads: the one operating directly upon the mind; the other consisting, for the most part, of various kinds of irritation in remote parts of the body. When mere emotion has been the exciting cause, and no physical disturbance can be discovered, it is probable that a full opiate, together with extreme quietude, and the constant application of ice to the head, may at once overcome the cerebral excitement, and avert any further bad consequences. It must, however, be remembered that opium is contraindicated, whenever gastro-intestinal irritation exists as a consequence of the presence of crude, unhealthy, or indigested matters in the stomach or intestines. When, therefore, the tongue is furred, the breath unpleasant, the alvine discharges scanty and unhealthy, as also when the abdomen is tumid and uneasy,—evacuant medicines should precede its administration. If gastric disorder exists in a marked manner, there can be no question as to the advantage and safety of giving an emetic, for the purpose of effecting the direct removal of gastric impurities; and ipecacuanha, with squills with or without the tartrate of antimony, according to the strength or debility of the patient, answers well for this purpose. Full vomiting will generally follow its exhibition; and if solid matters, such as undigested food, be not thrown up, there will often be an evacuation of vitiated, unhealthy secretions, in large quantity, which will be productive of much relief. Having premised this step, the next should be to act upon the liver and bowels, not only for the purpose of carrying off irritating matters, but of promoting secretion from them, as well as elimination. Calomel and jalap combined, are extremely efficacious for the purpose, and should be given in full doses; but when they fail, or are otherwise objectionable, I believe that croton-oil, with the watery extract of aloes, and a little Castile soap, will be found of signal service. I have certainly found this to answer well in these cases. It also should be given in decided doses, and repeated every four or six hours, until the necessary evacuations have been obtained. These will generally consist of a number of fœtid and unhealthy stools; and, when they have been voided, the symptoms will often manifestly improve, whilst the further management of the case will be considerably simplified.

II. The second indication refers to the necessity of allaying the inordinate cerebral excitement, and of restoring tranquillity to the ner-

vous system generally. These objects will be best attained, the former by the exhibition of tartar emetic in small and frequently repeated doses; the latter by opium, morphia, henbane, or some other narcotic. The tartrate of antimony may be given to the extent of one-sixth or one-eighth of a grain every half-hour or hour, until the desired effect is produced; and it is sometimes advantageously combined with small doses of the sulphate of magnesia. Any disposition to vomiting may be obviated by the addition of the hydrocyanic acid; and some have found it useful to add a few drops of the tincture, or sedative solution of opium, to each dose.

The administration of opium, in these cases, requires much caution, and careful consideration of the circumstances. Opium, I would observe, has a twofold action upon the economy; and each is distinct and dissimilar. Upon the functions of animal life it operates as a sedative; upon those of organic life, as a stimulant; and thus, whilst on the one hand, it lowers inordinate action of the brain and spinal cord, it tends, on the other, to exalt the activity of the vascular and organic functions. Hence, its efficacy is greatest in those cases in which the sanguiferous system is most depleted, and the vital and organic functions are most depressed; and, conversely, its employment is least proper where there is a tendency to vascular fulness, whether general or local, and more especially of the encephalon. In proportion then as the pulse is rapid and weak; in proportion as organic debility prevails, and there is an absence of cerebral congestion or determination,—is its use indicated in this disease; and, whatever may be the intensity of the mental excitement, in such cases it may be given fearlessly and freely. When, however, these conditions do not exist unequivocally, as will happen in the majority of instances, it must be had recourse to more guardedly, and its action modified according to the particular circumstances of each. "Opiates have been given with two intentions," says Denman; "some have merely proposed to soothe and moderate the violence of the disturbance by the frequent repetition of small or moderate doses; others have aimed, by the more liberal use of opium, often repeated, to suppress the irritability altogether. As far as I can judge, the former method is far preferable to the latter; and I think there can be no doubt but that opiates in larger doses, instead of diminishing, add, in no small degree, to the irritability which before existed."[1] It is certainly impossible for any one to lay down a rule, applicable to all cases, for the administration of opium, or any other narcotic, in this disease. I have found full doses at bedtime, with smaller during the day, to answer well in some instances; and it is sometimes useful to alternate the use of one narcotic with that of another. Tranquillity and sleep are the great desiderata to be attained; and different medicines, and different modes of exhibiting them, will be required in order to attain this end in different cases. It is, however, most necessary to watch the effect of such remedies, and not to push them beyond certain limits, when their efficacy is questionable, merely in deference to popular custom or opinion.

As auxiliary to these measures, the pediluvium, sinapisms to the

[1] Denman. Introduction etc., Seventh Edition, p. 503.

calves of the legs, and revulsives to the extremities, may often be had recourse to with advantage. The use of the pediluvium was especially recommended by Dr. Robert Whytt; and he gives, in illustration of its utility, the following case, which would appear to have been one of puerperal insanity. "A lady, aged about twenty, on the fourth day after being delivered of her first child, began to be feverish, and slept none. After this she became very delirious, talked constantly, had sometimes tremors, and was so restless, that for two days she had not lain one minute in the same posture, and was with difficulty kept in bed by two or three nurses. On the tenth day after her delivery, when I first saw her, the symptoms now mentioned were all increased, only she spoke none, and seemed to understand nothing that was said to her; her pulse, which was but of moderate strength, beat above one hundred and fifty times in a minute,—nay, once, when she was more agitated than usual, it rose to one hundred and eighty strokes in that time, and became withal very small. As she had been blooded, and blistered, and used several other remedies, *without advantage*, I ordered her feet and legs to be put immediately into the warm *pediluvium*, which was done by making her sit up on the bedside. At first it required two people to keep her feet in the water; but in less than a quarter of an hour she grew calmer, and made little motion, either with her legs or any other part of her body. After using the pediluvium for half an hour, she was put to bed, but soon began to grow as restless as formerly; upon which account warm fomentations were applied to her legs and feet, and renewed, from time to time, for near two hours, but without any benefit. I therefore thought it best to renew the pediluvium, which was used, at this time, for a full hour. It soon made her sit quiet; and, after she was put to bed, although she did not sleep, yet she lay several hours without tossing as usual, and her pulse was reduced to 136. As often as she began to be any ways restless, the pediluvium was renewed. After using it the fourth time, she got several short sleeps, was less delirious, and her pulse only made 120 strokes in a minute. From this time (viz., the eleventh day after her delivery), the pediluvium, which was never repeated above twice in twenty-four hours, procured her longer sleeps, and lessened all her bad symptoms; so that, in two days more, she was quite free of the delirium, and her pulse did not exceed ninety in the minute."[1]

III. The next indication to be attended to, is to guard against the occurrence of congestion, effusion, or other disease of the brain. Such consequences might frequently be anticipated from the extreme cerebral disturbance going on; but, under proper treatment, they are fortunately rare. Nevertheless, the possibility of their occurring must not be lost sight of; and every precaution should be taken to avert them. The state of the circulation in these cases generally forbids the employment of active measures: general blood-letting is, for the most part, inadmissible, and hence abstraction of blood should be limited to the application of a few leeches to the temples, or behind the ears, when circumstances render local depletion necessary; but the constant application of ice to the head, the free use of purgatives, a careful diet,

[1] On the Nature, Causes, and Cure of Nervous Disorders, etc., pp. 453-54-55.

and tartar emetic in contrastimulating doses, is safer practice, and will generally obviate all danger on this score.

IV. The last indication points to the necessity of sustaining the patient, restoring her general health, and improving the condition of the blood. These are matters of the utmost importance; and, upon their due fulfilment will her recovery mainly depend. The means to be employed for these objects comprise all those measures of diet and regimen which appertain to the treatment of anæmia. The patient should be placed in a large, cool, and well-ventilated apartment; her diet should be carefully attended to, and this, in the early stages of the disease, should consist of light, unstimulating food, administered regularly and frequently, but in small quantities at a time. While there is much heat of skin, a quick pulse, and great excitement, milk, gruel, arrow-root, and sago, or other farinaceous articles, form the best diet. As the excitement and febrile disturbance subside, a little animal food, or fish, may be added; and, if the extremities should become cold, and the pulse very feeble, wine must be given in addition, and this sometimes largely. In severe cases, it will be necessary to check the drain upon the system occasioned by lactation; and for this purpose, evaporating lotions should be applied to the mammæ, whilst the bowels are kept open by saline aperients. In conjunction with these measures, the patient must be kept perfectly tranquil. All interviews with friends and relatives had better be prevented; conversation should be prohibited; and a regular nurse, accustomed to the care and management of the insane, should be in constant attendance. It is unnecessary to add, that so long as the patient is under the influence of any mental delusion, she must be strictly watched, and every thing kept out of her reach, with which she might do injury to herself or others.

Under this system of management, the progress of the case will generally be satisfactory; and, as the general health improves, the mental aberration will disappear. Should it be otherwise, additional measures for the restoration of the health will be necessary. Change of air will prove serviceable, and recourse may be had to tonics in addition to the regimen laid down. Of these, it would be advisable to commence with the mildest,—such as the mineral acids, or some light bitter; and, afterwards, to prescribe the more powerful,—such as quinine, or some of the preparations of iron.

I conclude, then, by observing, that the relations which subsist between anæmia and puerperal insanity are often of a very intimate nature; and that too much care cannot be paid to the investigation of this point. I do not contend that *all* forms of puerperal mental disorder are dependent upon anæmia; for I believe that they may arise from other causes, and be connected with other states of the blood:—but I maintain that the asthenic forms of the disease are by far the most frequent, and that of these anæmia constitutes an important pathological element. I believe, moreover, that a careful consideration of this point will often enable us to anticipate and avert the attack, or, when it has occurred, suggest the best method of treatment.

Chester Place, Hyde Park Gardens, May 1851.

ON THE HEALTH OF LONDON DURING THE SIX MONTHS TERMINATING MARCH 29, 1851.

By JOHN WEBSTER, M.D., F.R.S., Fellow of the Royal College of Physicians, Consulting Physician to St. George and St. James's Dispensary, etc.

Since my last half-yearly Report on the Health of London, published in the twenty-fourth number of the London Journal of Medicine for December 1850, 27,954 persons have died in the metropolis during the six months extending from September 30, 1850, to March 29, 1851. Throughout the first quarter, embraced in the following report, the health of London has been, unquestionably, more favourable than during the three parallel months of 1849. The total deaths in October, November, and December of 1850 were 12,544; whereas, throughout the same period of the preceding year, they amounted to 12,877; thus making a diminution of 333 in favour of the latter period. With reference, however, to January, February, and March of the current season, the result has proved quite otherwise; as it appears that 15,410 persons died in London during that period, which number, if compared with the 13,219 deaths reported in the similar quarter of last year, gives an increase of 2,191, or 16·57 per cent. This excess of deaths, it seems important to mention, was chiefly confined to the last four weeks of the above period; when the total number of fatal cases recorded amounted to 5,478; whereas, during the parallel period ending March 30, 1850, they only reached to 4,035; thus making an augmentation of 1,443 deaths in the similar four weeks of the current year.

Pursuing the plan adopted in my former reports, I now proceed to offer some general remarks on the principal diseases which exhibited either a diminution, an increase, or an uniform rate of mortality, during the six months comprised in the present communication. From the facts brought forward to illustrate the sanatory condition of our enormous metropolitan population, readers may form their own opinions, altogether irrespective of my conclusions from the same premises.

Diseases which have lately exhibited a Diminished Rate of Mortality. During the last six months, the disease which manifested the most marked diminution in its rate of mortality was cholera, only thirty fatal cases having been recorded, instead of 502 reported during the parallel two quarters of 1849-1850. It is also interesting to mention, that not more than seven examples of this disease were met with in the whole of London during the three first months of the current year.

Diarrhœa and dysentery, like cholera, have also prevailed less violently in London during the past six months, than in the same months of 1849 and 1850. From the first complaint, 539 deaths occurred instead of 689 in the former period; whilst there were only 71 fatal cases of dysentery, in contradistinction to 122, similarly compared.

Measles and scarlatina, likewise, have each exhibited a diminished

rate of mortality. Of the former complaint, only 627 fatal cases have occurred, in lieu of 641 during the parallel period of 1849-50. In scarlatina, although the difference is also inconsiderable, there has still been a diminution; 635 deaths being reported, instead of 685, which occurred during the six months ending March 1850.

Apoplexy and paralysis come also within this category, both maladies having recently proved less fatal than in the former parallel season. From the first named complaint, 646 persons died during the recent six months, instead of 700 reported in the season 1849-50; whilst 560 deaths occurred from paralysis, in place of 623 during the corresponding quarters of the previous year.

Although the total number of persons who lost their lives by violence in London has been greater than in the previously quoted period, some of the casualties are less considerable. For instance, during the six months terminating the 30th March 1850, 727 persons died by violent deaths; whereas, during the six months comprised in the present report, the total number amounted to 833, being an increase of 106, or nearly one-seventh. Of the particular kinds of violence followed by death, fractures constituted the most frequent; then burns and scalds; whilst drowning was also common, of course amongst the river population. In deaths from burns and scalds, however, there has recently been some diminution, 149 individuals having lost their lives in this way, instead of 164 reported during the parallel six months of the previous year. It is also deserving of notice, that during the last quarter, 115, a very large proportion of these fatal cases, occurred in young persons under fifteen years of age. This fact probably indicates, that such accidents chiefly occur in private houses and domestic circles, and not in manufactories or public establishments, where adults are principally employed. At all events, children and young people have been the most frequent victims of burns and scalds.

Diseases which have exhibited an Increased Rate of Mortality. Notwithstanding that the health of London has been satisfactory during the last half year (except in the month of March), several diseases have proved more prevalent than usual. To these I would now briefly direct attention, as being indicative of the unhealthy character of part of the more recent season. Diseases of the organs of respiration have generally become much more fatal during the six months just terminated, than throughout the parallel quarters of the previous year. In the last-named period, the total deaths from diseases belonging to this division, were 4,935; whereas, during the six months ending the 29th of March 1851, they amounted to 5,784,—making an increase of 849 fatal cases, or 17·20 per cent.

On examining the subject more in detail, it appears that bronchitis exhibited greater fatality this year than in the previous; 2,534 deaths having recently occurred from that complaint, instead of 2,089, which were met with during the preceding parallel two quarters. From pneumonia, the deaths during the more recent season amounted to 2,190, instead of 2,000; and, by asthma, 599 persons died, in lieu of 474 reported during the previous period: whilst influenza, which proved fatal to 87 persons in the two quarters ending the 29th of

March 1850, caused death this year in 231 instances,—the largest proportion of such cases having occurred in the month of last March, when that complaint prevailed almost epidemically.

Small-pox has likewise been recently more prevalent than formerly, 466 persons having died of that malady during the last six months, in contradistinction to 194 fatal cases, of the same description, which occurred in the parallel quarters of the previous year. Indeed, variola has prevailed throughout the metropolis more extensively during the last three months, than at any period in the preceding two years. This is shown by the fact, that only 518 persons died from small-pox, in London, during 1849, and not more than 498 in 1850; so that nearly as many individuals have already fallen victims to it, from the 1st of January to the 29th of March in the current year, as throughout the whole of either of the preceding twelve months. This feature of the present season deserves special attention, and ought to render the public more anxious to second the efforts made by the profession and the legislature to disseminate genuine vaccination, which is truly the best and safest preventive of variola.

Hydrocephalus, hepatitis, rheumatism, convulsions, and typhus fever, have also proved more fatal during the period referred to in the present report, than in the previous year. From hydrocephalus 716 deaths have occurred, instead of 684, during the former six months: from hepatitis 99 fatal cases, in contrast to 73; from rheumatism 121 instances, instead of 116 previously reported; while convulsions caused death in 1013 individuals, in place of 955 during the former period; and lastly, from typhus fever—at all times a good indication of public health—instead of 962 fatal cases formerly reported, 1140 occurred, of which 171 took place during the month of March in the current year; whereas only 126 deaths by the same cause were recorded in the same month of 1850. This shews that in this disease, as well as in some other maladies, the recent spring has proved more unhealthy than the preceding.

In addition to the diseases now enumerated to have prevailed less fatally than previously, erysipelas also deserves notice. The fatal cases amounted only to 168 during the last six months: whereas 228 cases were met with in the parallel two quarters of 1849-50. Like general dropsy, ascites has been also less frequent than previously, although not to any considerable extent,—58 deaths from this malady having been reported throughout the period embraced in the present report, instead of 63 cases during the former half year. Other illustrations of a similar character might be quoted.

More persons lost their lives by fractures and contusions throughout the metropolis, during the last six months, than in the parallel period ending March 1850; the number of accidents having amounted recently to 305, in contradistinction to 268 reported in the former two quarters. Deaths by drowning have been, unfortunately, also of late more numerous; 129 persons having perished in this manner, instead of 95 during the period previously quoted. The number of persons who lost their lives by hanging and suffocation, during the past six months, was likewise considerably greater than in the same period of the previous year; 125 deaths, by these causes, are now

recorded, in contrast with 86 cases of a similar description in the two quarters terminating the 30th of March 1850. In deaths from wounds the difference was, however, in favour of the former season; 47 persons have died from the above cause during that period, whereas 54 fatal cases were recorded in the six months ending the 29th of last March. The total augmentation of deaths reported from the casualties now mentioned, and other violence, occurred during the last quarter, viz. in January, February, and March of the current year, when not less than 476 persons lost their lives by fractures, drowning, hanging, suffocation, and wounds, etc., in contradistinction to 386 violent deaths of the same severe description, during the parallel three months of the preceding year. Such facts indicate the dangerous occupations of various persons in this great metropolis; whereby numbers are cut off annually, and even to a greater extent than the public generally would perhaps believe, unless upon the most irrefragible evidence. Medical men are fully cognizant of the large numbers of their fellow-creatures who every year die violent deaths, especially among those who form the actual population of London. Those, however, who live in affluence, or pass their days in amusement, and never visit the workshops and crowded haunts of industrious men, know very little indeed respecting the dangerous nature of many occupations therein; whereby health is frequently impaired, and life often endangered. These facts deserve attentive consideration, with a view to prevention of similar accidents in future.

Diseases exhibiting nearly an uniform rate of Mortality. Diseases affecting the kidneys and urinary system, have genarally manifested a remarkable uniformity in the number of deaths; 309 individuals having died from these causes during the last six months, instead of 307 in the previous parallel period. From dropsy, 414 persons are reported to have died, in place of 419. From hæmorrhage, 103, in contrast to 106 previously reported. From phthisis 3,247 individuals perished in the metropolis during the last two quarters, instead of 3,099 in the former period, already so often quoted. From cancer the number of deaths was identical, 455 having been recorded in each of the six months alluded to. From enteritis 178 deaths were reported, instead of 170 last year; and from peritonitis the fatal cases recently amounted to 102, in place of 104 met with during the parallel six months ending in March 1850. Several other maladies manifested considerable uniformity in their rates of mortality. Sufficient data have thus been stated, in the present and previous reports, to prove that, unless under particular circumstances, the ratio of deaths from certain diseases, even amongst an enormous metropolitan population, ranges often within nearly the same uniform standard; but which may be of course, at times, influenced by season, and various collateral external circumstances.

Age of Individuals who have recently died in the Metropolis. A very large proportion of the deaths recently recorded, were amongst young subjects. Indeed, in reference to this very important characteristic of diseases affecting the population of London, I would repeat, in the words of my last report, when alluding to this

subject, that "the large number of children who annually fall victims to disease in London, exhibits a feature in the mortuary reports of the metropolis, which ought to arrest the deepest attention." Great as the proportion then was of individuals cut off before they had arrived at the age of puberty, the number of deaths similarly classed has scarcely diminished; 12,345 persons under fifteen years of age having died during the last six months, which is 44·19 per cent. of the entire mortality within that period. Those dying from 15 to 60 years of age, amounted, on the other hand, to 9,227, being 33 per cent.; whilst 6,252 individuals, or 22·36 per cent. of the whole number, were upwards of 60 years old; thereby leaving 130 persons whose exact age was not registered. The above facts, nevertheless, demonstrate satisfactorily that, notwithstanding many individuals may die prematurely in England, still a large number of the inhabitants attain considerable longevity, if not greater than in any other country of Europe, or even throughout the universe.

Having already adverted to various diseases, which frequently prove very destructive to life amongst children and young persons, it seems unnecessary again to resume that part of the subject. However, one important cause of death amongst infants, merits more than a passing remark at present; as the evil already alluded to in former reports, unfortunately appears increasing. I allude to the "privation of breast-milk", the best nourishment for infants during the first months of their existence. From the want of this, 107 infants perished in London during the last six months; and if the 89 individuals similarly sacrificed in the two quarters immediately preceding be added, it appears that 196 helpless fellow-creatures have fallen victims to this privation during the period of twelve months. This was doubtless, in some instances, the consequence of fashionable mothers neglecting to suckle their own offspring, or, in others, to the poverty of parents, tempted to leave home and their new-born children by the inducement of high wages, ample food, and many creature-comforts they would enjoy as wet-nurses in the houses of the more opulent. Such a custom, unless in particular instances, when the mother is totally unable, from disease or physical causes, to nourish her own infant, should be discountenanced; since experience amply proves, that any deviation from the law of nature, is generally detrimental both to parent and child.

Mortality among the Pauper Population. Similar to the result stated in my last report, the proportion of fatal cases met with, in all the charitable institutions of London, is considerable. Amongst the 27,954 deaths registered during the six months terminating on the 29th of March 1851, almost one-sixth, or 4,451 persons, died in the workhouses, asylums, prisons, and hospitals; which indicates that near 16 per cent. of the total mortality occurred in the above class of the population; many of whom were treated gratuitously during their last illness, besides being supported at the public expense. This fact is creditable to the richer classes of society, and shews the extensive practical benevolence thereby disseminated among the less fortunate part of the community: particularly in the liberal support of numerous public charitable institutions, in which the 4,451 deaths, now alluded

to, were recorded. The majority were male inmates; 2,487 of that sex having died in the above establishments, the remaining 1,964 being females; hence giving an excess of 523 in the former class, or 26·62 per cent. more deaths amongst male than female residents.

Besides the above, a considerable proportion of the deaths, recently recorded, were patients treated at dispensaries. At the dispensary with which I am connected, amongst the 3,161 patients treated by the medical officers of the charity, during the last six months, 58 deaths were reported; being at the rate of one fatal case in every fifty-four and a half admissions. Therefore, if the casualties at every other similar metropolitan institution are taken into account, it must consequently be acknowledged, that the mortality amongst the labouring classes is always very considerable.

Workhouses. Upwards of half the entire mortality amongst the pauper population of London, during the last six months, took place in these institutions. The majority were female inmates; the exact numbers being 1,237 men, and 1,347 women, making a total of 2,564 deaths, or 9·17 per cent. of the whole number. Another feature also deserves notice; viz., that 786 of the above deaths, or nearly one-third, were reported during the last six weeks of the period embraced in this report; which will assist to explain the augmented mortality already stated to have prevailed during the recent season. Many of the fatal cases occurred in persons of advanced life, although a number also were young children; in fact, disease generally has recently proved more destructive to these two classes of individuals, than to persons at the prime of life. Of the deaths recorded in workhouses, only one-fifth, or 543 out of 2,564, of the whole number, occurred in those situated south of the Thames. This is more important, as the total number of inhabitants of the southern districts only amounts to about one-third of those resident on the northern bank of the river. Hence it may be confidently inferred, that sickness has lately prevailed less extensively amongst the pauper population of parishes in the Surrey division, than on the Middlesex side of the Thames, notwithstanding the lower situation, and the admitted greater frequency of epidemic diseases in the former district. Its liability to epidemic influence was remarkably illustrated in former times, during the prevalence of plague; and more recently in 1849, when upwards of half the deaths from cholera took place in the southern division of the metropolis, although it had a much smaller number of inhabitants.

Lunatic Asylums. The total number of deaths in establishments for insane patients, during the past six months, amounted to 221; of whom 116 were male, and 105 female lunatics. This appears a large mortality, especially if contrasted with the previous summer and autumn quarters, when the aggregate deaths, in the same institutions, were 171. The results now mentioned are, however, consistent with general experience; since death oftener supervenes, amongst lunatic patients, during the cold and severe weather of winter, than in temperate seasons; notwithstanding that mental disease more frequently attacks individuals in the hot days of summer, than in the colder months.

The above comparative amount of fatal cases, met with in the two sexes of lunatics, is also interesting; as the figures now quoted fully bear out a remark which I have made elsewhere; namely, that 'mania, although more common among women, is in them more curable, and less fatal than among men". A larger number of female lunatics being usually under treatment in the metropolitan asylums than of males, the occurrence of 105 deaths among the former sex, in contrast to 116 among the latter, strongly supports this view; especially if the facts recorded in my last report be remembered, wherein it is stated, that 96 insane male patients, and only 75 females, died during the period therein included. According to the above data, besides others which might be quoted if necessary, a more unfavourable prognosis of the termination, in cases of insanity, may be given *cæteris paribus*, in men than women; whilst a greater number of recoveries may be confidently expected in the latter, than in the former class of lunatics.

Metropolitan Prisons. I now approach a most important subject of inquiry, as well to members of the medical profession, as to legislators and philanthropists. Into the whole of this interesting question, the present is not, however, the proper place to enter at any length; the point, now under discussion, being simply the mortality recently met with in these public establishments. Judging from the number of deaths reported in all the prisons of London, during the last six months, the inmates seem to have been healthy, and the localities salubrious, with the exception of Millbank. Notwithstanding that the average number of prisoners in the metropolitan gaols, including the hulks at Woolwich, usually amounts to about 6,120, and that even these are often changed, only 27 inmates have died during the last two quarters; 20 being men, and 7 women. This constitutes a very small rate of mortality; and as eleven of the above cases, or 10 men and 1 woman, were reported from the Millbank Penitentiary, it hence becomes evident, that residence in a London prison, speaking generally, seldom proves inimical to the bodily health. Millbank, however, does not appear so salubrious as several of the other prisons; for two-fifths of the entire deaths in these institutions, now reported, took place there; although the number of prisoners only averages about one-fifth the total amount. When we reflect on the statements promulgated, in ancient times, respecting the insalubrity of the London gaols, it is highly satisfactory to find, whatever difference of opinion may still prevail in regard to the discipline in force in certain quarters, that, with the exception just mentioned, the physical health of the majority of prison inmates is often better within, than without the walls of these receptacles. This is, doubtless, in great part, owing to the sufficient and wholesome dietary allowed to prisoners, as well as to their being less exposed to the demoralizing influence of vice and intemperance. It is farther worthy of note, that at the City Bridewell, although situated in a densely populated neighbourhood, and having Fleet Ditch on one side, with Puddle Dock very near the other, only one prisoner died during the last two years; namely, a female from phthisis of long continuance; notwithstanding the number of com-

mittals amounted to 2,108 during the above period. The principal complaints noticed among the inmates, have been cutaneous and venereal disorders: whilst the number of infirmary cases have seldom exceeded three at one time. It is also important to state, when the cholera prevailed with great intensity in this district of London, during the autumn of 1849, not a single case occurred within the walls of Bridewell. This exemption becomes more remarkable, when it is considered that a large proportion of the prisoners here confined, were, it may be said, predisposed to such a disease, from the destitute condition to which many of the vagrants were reduced previous to their committal.

Lying-In-Hospitals.—The mortality reported from these public establishments, of which there are four within the metropolis, has been very moderate; indeed, the rate was much under that recorded during the previous six months. The number of deaths met with, throughout the two quarters, embraced in the present report, was only fourteen, of whom seven were children, and the rest women. It should be also remembered, that eighteen deaths during child-birth occurred in the same institutions, during the two quarters immediately preceding, besides the deaths of twelve children. These statements and facts indicate, that the condition of lying-in institutions has been recently more salubrious than ordinary; whilst no puerperal epidemic malady seems to have prevailed in any of these hospitals, which sometimes presented, in former years, a very high rate of mortality.

Hospitals for Special Diseases. Within this category, four hospitals are now comprehended, upon each of which establishments I propose making a few general observations. In order, however, to secure accuracy respecting the number of patients admitted, and the total amount of cures and deaths recorded, I addressed a note to different friends officially connected with the several charities, to which applications they all courteously replied, giving me the figures contained in the subsequent statements. To these gentlemen I would now return my sincere thanks. Not only is the information valuable, which has been thus furnished, to myself individually, but the various facts and data will likewise prove highly useful to other observers. The first special institution which merits notice, is that appropriated to syphilitic diseases.

Lock Hospital. During the last six months, 166 patients have been admitted into this establishment, consisting of 85 men, and 81 women, whilst 128 persons were discharged cured, comprising 71 male and 57 female patients; but no death occurred throughout the entire half year. It hence appears, the ratio of cures, in both sexes, was 77 per cent,—the mortality *nil*. In regard to male patients, considered separately, the proportion of cures was greater than among females; 83·53 per cent. of the former, and only 70·37 per cent. of the latter sex has thus been discharged convalescent. It may therefore be inferred, that most complaints affecting female inmates of the Lock hospital are of a more inveterate character, and require a longer

period for their treatment, than diseases usually affecting male patients, although the numbers of both sexes admitted were nearly identical. This inference may perhaps appear as not yet sufficiently proved by the facts adduced; nevertheless, the deduction is reasonable, and I now venture to express such an opinion, believing it deserves mature consideration, and will be verified by more extensive experience.

Hospital for Consumption, and Diseases of the Chest (at Brompton). Phthisis unquestionably constitutes the most fatal disease affecting the inhabitants of this country. The average annual mortality from that complaint usually amounts to about 7,000 deaths, in London alone; whilst, throughout England and Wales, the number ranges near 55,000 per annum. Such mortuary details sufficiently indicate the prevalence and severity of this malady, amongst all ranks of the population. With a view to investigate, and to treat specially pectoral complaints, the charity adverted to in the present paragraph was some years ago established; and into it, according to an official return kindly furnished on my application, 194 patients, consisting of 118 men, and 76 women, were received during the six months embraced in this report. The number discharged "more or less relieved", as stated in the document already mentioned, was 88 males, and 70 females; thus making a total of 158 individuals. Whether any patients were ultimately cured, it is difficult to say definitively, as the statement supplied does not contain particulars relative to that circumstance; indeed, I have been informed, the word "cured" is never entered upon the registers of this institution, as it might give rise to erroneous impressions, or lead to discussions which could produce no beneficial consequences. The deaths reported during the six months embraced in the present report, amounted altogether to 33, of whom 22 were men, and 11 women; hence, the gross mortality recorded at the Consumption Hospital, compared with the number of admissions, reached 17 per 100. However, on separately comparing the mortality amongst the two sexes, it appears, the ratio actually amounted to 18·64 per cent. in male, and only to 14·47 in female patients, which shews, that consumption proved, at least during last winter, comparatively less fatal to the latter, than the former class of inmates; although, it is well known, that the disease more commonly attacks women than men in this climate. In proof of such an opinion, besides the fact, that during the two quarters immediately preceding, the proportion of deaths in the two sexes, at this charity, was somewhat different from the present, notwithstanding 33 fatal cases were also then reported, of whom 15 were female and 18 male patients, I would mention, that in 1847, 25,083 males died of phthisis, against 28,234 females similarly affected, throughout England and Wales. This statement also shews, that nearly as many persons are annually carried off by consumption, as by typhus and pneumonia combined, which form two of the next most deadly complaints prevalent at the present time in Great Britain; seeing that 30,320 patients lost their lives from typhus fever in the year just quoted, and 23,447 from inflammation of the lungs; thus making an aggregate of 53,767 indivi-

duals who became victims to the above-named maladies. Another feature indicating the great prevalence of pectoral disorders in this country, and also their severity, may be referred to as evidence,—namely, that almost one-fourth of the total deaths recorded by the registrar-general, including consumption, usually arise from affections of the respiratory organs. This occurred during 1847, when, in a total mortality of 420,977, not less than 104,432 fatal cases were reported from diseases of the lungs, and of the other organs of respiration; to which statement, it may be also added as an important fact, that one person in every 310 of the whole population annually dies of consumption.

Small-Pox Hospital. During the six months terminating on the 29th of last March, 264 patients affected with variola were admitted into this institution, whilst the deaths amounted to 46; consequently, the mortality averaged 17·42 per cent., or nearly two in every eleven cases. Considering the malignity which variola so often exhibits, the above ratio of deaths does not appear excessive; but, if the fact be also taken into account, that about two-thirds of the patients admitted had been previously vaccinated, the results now reported assume quite another aspect, as they then shew, that either the individuals had never been properly imbued with cow pox, or if vaccinated, its protective influence had become worn out, or eliminated from the system. Respecting vaccination, as a protection against small-pox, this is not the proper place to investigate cursorily so important a question; nevertheless, I would express my conviction, that in a very large majority of persons, who exhibit the genuine cow-pox, the likelihood of being attacked by variola is very small; but if this should happen, the prospect of a fatal termination is more improbable.[1]

In addition to the 264 patients attacked by genuine variola, and removed into the small-pox hospital, six individuals affected with eruptive diseases, not variolous, were likewise admitted. Amongst these, however, no death occurred; consequently, altogether, 270 persons were treated as inmates, about one-third only being females; hence, the disease seems to have been, according to the above data, twice as common in men as in women. This conclusion coincides, in some degree, with general experience; and it may be stated, in proof of its correctness, that in 1847, when 4,227 deaths were recorded from small-pox, throughout England and Wales, 2,230 took place in males, and only 1,997 in females; thus giving 233 more fatal cases amongst the former than the latter sex, although women are considered to be the most numerous class in this country.

In comparison with the number of deaths now recorded as caused by small-pox, it may be interesting to mention, that nearly one hundred years prior to the time already quoted, viz., in 1749, notwithstanding that the population of London was only about 780,000, or scarcely one-third its present amount, no less than 2,625 persons died from variola in the metropolis, one-tenth of the total mortality being

[1] The reader is referred to the able exposition of this subject by Dr. A. Knox, in the London Journal of Medicine for December 1850, and April 1851.

then alone occasioned by this malady. Even subsequently to the introduction of inoculation, authors state that, one in every fourteen inhabitants born in England became the victims of small-pox—so malignant was this complaint at the above period. Now, however, and even in spite of the prejudices frequently still entertained by parents, especially amongst the lower ranks, who are often very adverse to employing vaccination, this scourge of the human race has, nevertheless, proved much more rare in many districts of England. Such an opinion seems more correct, when it is known that, only one person in about every 85 individuals born at present dies from small-pox; whereby, this disease, from being formerly the most fatal malady amongst the population, has fallen to a much lower position in the mortuary scale, and now occupies usually the fifteenth place on the list of deaths.

Fever Hospital. In this establishment, now situated at Islington, the deaths recorded amongst the inmates, during the last six months, amounted to 42; of which 19 occurred among the female, and 23 among the male patients. Compared with the mortality met with throughout the two quarters immediately preceding, the amount just mentioned is rather less than that previously reported; seeing that 50 patients then died in the Fever Hospital, of whom 26 were male, and 24 female inmates; whereby the proportion of the former sex was predominant at both periods.

Believing that it may prove interesting to make a few general remarks respecting the prevalence of febrile diseases in the metropolis, during the past year, especially if illustrated by the records of this useful institution, I would observe, that 544 patients were admitted, during the above period, in lieu of 653 the preceding year; thus making a diminution of 109. The numbers discharged cured amounted to 421, or at the rate of 77·38 per cent.; and, as the deaths were 90, the aggregate mortality of all cases, therefore, reached 16·50 per hundred,—being very nearly the average of the two preceding years.

Of the patients admitted during 1850, 357 were affected with continued fever, 59 with scarlatina, and 128 laboured under other diseases than fever. Again, in regard to the numbers dismissed cured, it appears, by the annual report, that 275 persons attacked by continued fever, left the hospital convalescent, 52 recovered from scarlatina, and 94 previously suffering from other diseases, not fever, were restored to health. Amongst the 90 deaths already referred to, 52 occurred from continued fever (including typhus, and the interic, or abdominal variety), making 14 per cent. The rate of mortality in the cases of typhus amounted, however, to 22·4 per cent; and of enteric fever, it was about 18 per cent. Seven patients died of scarlatina, and 31 of other diseases than fever; in which latter category, if calculated according to the admissions, the mortality is 24·20 per cent, being rather a high average. It should, however, be stated, in explanation of the above circumstance, and to mark the severe type of the diseases often affecting residents, that considerably more than half the 90 fatal cases now recorded, or 50 patients, died within seven days after their admission.

Before taking leave of the Fever Hospital and its operations, I must transcribe, from an authorized statement lately published, the follow-

ing paragraph, as it possesses much practical value, besides indicating the prevailing diathesis of diseases recently admitted. During the whole of last year, the report says, "Blood-letting has not been resorted to in a single instance; and, in few cases, was even the topical abstraction called for. On the other hand, it was found, when the stage of depression came on, that wine and other stimulants were, as in several preceding years, the chief measures on which dependence could be placed." In addition to the above important remarks, it is also instructive to add, on the same authority, that ague (ordinarily of comparative rarity in or around London) was last year met with in nine cases received into the hospital; all of whom were speedily cured. This fact becomes more interesting, as sometimes not a single case of periodic fever was admitted for years consecutively.

General Hospitals. In my last half-yearly report on the Health of London, I made some cursory remarks respecting the mortality met with at these establishments, which attracted considerable attention at the time, and led to much subsequent discussion. I again resume the subject more willingly, in consequence of being able, through the kindness of others, to bring before the profession some interesting statistical data, illustrating the movement of patients in various metropolitan hospitals. In order that various facts might be classified in an uniform manner, so that general principles might be established upon authentic evidence, and that, at the same time, the results so obtained from particular institutions might be compared, I forwarded to different friends attached to the eleven general hospitals of London, an exactly similar form, to be filled up, in separate columns, with the number of patients admitted, the number of cures, and likewise the deaths recorded during the six months referred to in the present communication. To the gentlemen thus addressed my best thanks are justly due, for their promptitude in replying to these inquiries; and although I have been unable to obtain an answer to every question, in consequence of the want of a secretary in one case, the labour of examining numerous registers in other instances, as also the fact, that sometimes the hospital books were only made up annually; nevertheless the data supplied were valuable; whilst the various figures given in subsequent tables cannot but prove of much use to practitioners, by enabling investigators to form their own opinions, besides otherwise deducing important practical conclusions. With these objects, the general hospitals of London were selected, since a large number of the sick and labouring poor are therein treated, particularly when suffering from the effects of severe disease, or accidents. The nature of the particular maladies affecting some patients, the kind of violence which had befallen others, or the special cause of death in those cases terminating fatally, however instructive such information would undoubtedly prove to the profession, are not detailed in the present report. Indeed, to make similar attempts, even if they did not terminate in failure, would render this communication not only too voluminous, but almost incompatible with the purpose originally proposed; more especially, as any undertaking of that description could be only accomplished by gentlemen officially connected with the institutions. However, I very confidently trust,

the time is not distant, when periodical reports will be regularly published, containing ample statistical details from all the metropolitan hospitals, so that the desideratum, to which reference is now made, will be effectually supplied; more especially, as the proceeding would be highly advantageous, and also conduce much to the advancement of medical science, based upon the best of all foundations—extensive experience.

Statistics of Patients in Nine General Hospitals of London, during Six Months, terminating at the end of March 1851.

Hospital.	Class of Patients.	Admitted.		Died.		Per Cent.
St. Bartholomew's	Medical ..	891		121		13·58
	Surgical ..	1,796		90		5·01
			2,687		211	7·10
St. Thomas's	Medical ..	913		92		10·07
	Surgical ..	1,224		50		4·08
			2,137		142	6·64
London	Medical ..	528		63		11·93
	Surgical ..	1,362		63		4·62
			1,890		126	6·66
St. George's	Medical ..	691		82		11·87
	Surgical ..	785		45		5·73
			1,476		127	8·60
Middlesex	Medical ..	627		51		8·13
	Surgical ..	640		26		4·06
			1,267		77	6·07
Westminster	Medical ..	458		40		8·73
	Surgical ..	318		11		3·45
			776		51	6·57
Charing Cross ..	Medical ..	179		26		14·52
	Surgical ..	443		16		3·61
			622		42	6·75
Royal Free	Medical ..	95		7		7·05
	Surgical ..	219		8		3·66
			314		15	4·77
King's College ..	Both classes		659	59		8·96
	Grand Totals		11,838		850	7·18

According to the data contained in this table, the number of patients affected by surgical diseases generally, but especially at the London and St. Bartholomew's Hospitals, predominated over the medical, excepting at the Westminster Hospital. In the first-named charity, the proportion was five surgical to two medical cases admitted; whilst at St. Bartholomew's, the former were exactly double the latter. Respecting the proportion of deaths recorded, the ratio ranged otherwise; being relatively more numerous amongst medical patients at all the hospitals, than in persons treated by the surgeons; and although that number was identical in both categories at the London Hospital, the comparative result was very different. Speaking generally, in reference to the ordinary rate of mortality met with in medical diseases, the mean averaged highest at Charing Cross and St. Bartholomew's Hos-

pitals, as the proportion, calculated upon the numbers admitted, reached 14·52 per cent. in the former establishment, and 13·58 in the latter; the lowest recorded being at the Free Hospital. Again, amongst surgical patients, the smallest mortality occurred at the Westminster Hospital, where the ratio averaged under 3½ per cent.; whereas, at St. Bartholomew's, five deaths occurred for every hundred admissions; but at St. George's Hospital the per centage of deaths among surgical patients was 5·73. Considerable discrepancy is therefore observed to exist in the gross mortality met with at different institutions. Thus,at King's College Hospital, the ratio seems higher than in any other charity, being near nine per cent., both classes included. On the other hand, the Free Hospital exhibits the lowest, or only 4·77 per cent.; whilst at St. George's, the proportion of deaths was 8·60 per cent.; whereas, at St. Thomas's, it was nearly two per cent. less, being almost identical in amount with that recorded at the London Hospital, where a larger number of severe accidents are usually admitted, than into any hospital throughout the metropolis. Other important inferences may be likewise deduced from the various figures given in the table, especially, as they not only illustrate the general mortality met with in various public charities, but likewise state the gross number of patients treated, during the period comprised in this communication.

No answer having been returned to my application respecting the movement of patients at University College, or Guy's, Hospitals, during the last six months, I regret it has been out of my power to enter either of these institutions in the table I have compiled. However, on examining the Registrar General's weekly reports, it appears 70 patients died in University College Hospital during the two quarters ending last March, instead of 78 in the previous; whilst at Guy's, the total deaths were 191 in the recent period, contra-distinguished to 164 in the former; thus making an increase of 27 fatal cases, or about one-seventh. Although it was impossible to procure the requisite return regarding Guy's Hospital, a friend, who obligingly examined the registers, states, that the medical and surgical cases admitted at this charity, from March 1850 to March 1851, amounted to 4,165; the deaths being 349 during the same twelve months; so that, the rate of mortality ranged within a fraction of 9·5 per cent., being higher than that recorded as occurring in any establishment quoted in preceding pages.

Notwithstanding discrepancies may appear in the mortuary details received from several hospitals, during the last six months, as compared with the two quarters from March to October 1850, the total deaths in the more recent period was greater, being 1,111, or 60 above the number recorded in the previous, when the aggregate amounted to 1,051. Even if the first three months of 1851 are alone taken into account, still an increase in the mortality will be found to have supervened in the hospitals, as 604 deaths, or more than half of the whole amount, took place in the months of January, February, and March, in contradistinction to 507 reported during the quarter immediately preceding. It may be farther stated, in proof of the augmented sickness more recently prevalent in London, as compared with the parallel quarter ending in March 1850, that 583 deaths occurred, during that last-named period, in the eleven general hospitals. This result also

confirms the statement given in a former paragraph, when alluding to the augmented mortality lately noticed amongst workhouse inmates.

Thinking some inquiry regarding the sex of patients treated in metropolitan hospitals, would prove interesting, the following table has been constructed with the express object of illustrating that question.

Sex of In-patients Admitted and Died in Six General Hospitals of London during Six Months, terminating at the end of March 1851.

Hospitals.	Class of Patients.	Admitted.		Died.	
		M.	F.	M.	F.
St. Thomas's	Medical.....	405	508	45	47
	Surgical	784	440	31	19
London	Medical.....	321	207	38	25
	Surgical	941	421	43	20
St. George's	Medical.....	347	344	41	41
	Surgical	521	264	32	13
Middlesex	Medical.....	286	341	27	24
	Surgical	413	277	19	7
Charing Cross	Medical.....	91	88	12	14
	Surgical	281	162	10	6
Royal Free	Medical.....	65	30	6	1
	Surgical	117	102	6	2
	Totals	4,572*	3,184	310†	219‡

* Being 1,388 more males than females, or an excess of 43·59 per cent.
† Or 6·78 per cent. ‡ Or 6·90 per cent.

Viewed in a general aspect, the above statement shows that a large proportion of hospital inmates were male patients,—proportions in a hundred being about 59·33 males to 40·67 females. At two institutions, however, the reverse was the case in respect to medical patients, namely, at St. Thomas's and the Middlesex Hospitals. In the former, one-fourth more females than males, labouring under medical diseases, were admitted; and a similar peculiarity occurred in the latter charity, although the difference was less considerable. In the other institutions, more male surgical patients were received into the wards appropriated to that class, than of the opposite sex; particularly at the London and St. George's Hospitals, in both of which receptacles, the number of male surgical patients was about double that of females.

The average rate of mortality in the two sexes, speaking generally, was almost similar; the difference being, however, rather against females, in whom it was nearly 7 per cent.; whereas, amongst male patients, the mean ranged about six and three quarters. This result was occasionally reversed; for instance, at the Middlesex Hospital, the mortality exceeded six and a half per cent. in male patients, whilst, amongst females, it was under five and a half; thus making a difference of one per cent. in favour of the former. On the other hand, at St. George's Hospital, the ratio was identical amongst the medical patients; since, exactly the same number of male and female inmates, of that division, died, whilst the admissions were very nearly equal.

Nevertheless, in the surgical department, the mortality ranged differently, being under five per cent. amongst female patients, and amounting to 6·14 per cent. in the opposite sex. Reasoning from these, and previously recorded premises, practitioners may fairly assume, that the prospect of a fatal termination in male or female patients, when labouring under medical diseases of an ordinary kind, will be nearly alike; whereas, surgical complaints will probably prove more dangerous in the former, than in the latter sex. At the Charing Cross Hospital, deductions somewhat different may be derived from the figures supplied; thus, the proportion of deaths amongst female inmates, of the medical wards, was greater than in males of the same category; the former being nearly 16 per cent., and the latter ranging about 14·28. Nevertheless, amongst surgical patients, the ratio coincided with that of other hospitals; the mortality being 3·55 in male patients attacked by surgical maladies, and 3·70 per cent. in females also of that category. The above conclusions being, however, based upon a limited number of data, they should be, therefore, received as only approximations to the truth; or rather, as a general illustration of the practical knowledge which would be certainly obtained, if a more extensive series of facts and figures were brought into calculation. Indeed, could accurately detailed registers of the public hospitals—kept upon an uniform system—be made available, the benefits, which must thereby accrue to the profession, would prove invaluable; since the medical attendant, instead of feeling otherwise occasionally doubtful, respecting the result likely to supervene in particular diseases, might then foretell future events almost as certainly as actuaries and physicians (conversant with the science of life insurance) now prognosticate the probable age which particular individuals, under ordinary circumstances, may expect to attain.

One of the questions put by me to the officers of general hospitals, referred to the proportion of patients discharged cured. Owing, however, to the difficulty of separating absolute cures from cases which left the wards relieved, with a fair prospect of future convalescence, it has become impossible to discuss this point in a satisfactory manner. Notwithstanding the above defect, according to the returns obtained from several charities, it appears that more sick inmates were cured, speaking relatively, in the larger than in less extensive establishments; that surgical patients oftener recovered than medical; that females, treated in the medical division, became convalescent in a greater proportion, than males belonging to the same department; and lastly, that surgical patients, of the male sex, appeared to recover from their various maladies in smaller numbers, than female inmates similarly circumstanced.

Statistics of St. Thomas's Hospital. Believing that it may prove interesting to my readers, I here offer a few general remarks, respecting the principal occurrences met with in one extensive metropolitan hospital. I am induced to do so, because numerous interesting pages have been recently dedicated, in the London Journal of Medicine, to the illustration of various important subjects connected with these establishments. I select St. Thomas's—one of the oldest

and most magnificent institutions of the kind in the metropolis,—and within whose wards 4,239 in-patients were admitted during the year 1850. These were not re-admissions, but separate individuals; as the system of nominal re-registration of the same patient is entirely excluded from the following statistical returns; which were obtained through the kindness of an influential official friend. In reference to the practically useful subject of hospital statistics, it farther affords me much satisfaction to state, that effective measures are now being taken to obtain an ample statement of all the principal points of interest connected with the numerous cases of disease treated, during the current year, at this hospital, besides the results obtained. This report, when completed, will doubtless prove creditable to the managing authorities, as well as beneficial to the entire profession; whilst it may become a good example for imitation in other quarters.

To shew the nature of the diseases which proved fatal in this charity last year, I would now direct special attention to the subjoined report, enumerating the causes of death in the 270 fatal cases recorded at St. Thomas's Hospital during 1850.

Abscess 6	Dropsy 2	Paralysis 3
Aneurism 3	Dysentery 1	Pericarditis 5
Apoplexy 6	Enteritis 1	Phthisis 59
Bronchitis 10	Erysipelas 2	Phlegmon..... 6
Burns and Scalds .. 6	Fistula 1	Pneumonia 10
Cancer 9	Fractures 11	Poison 1
Convulsions 3	Gout 1	Purpura 1
Diabetes 1	Hæmorrhage 4	Scarlatina..... 1
Died on entry 1	Hepatitis 1	Scrofula 4
Disease of Brain 2	Hernia 3	Stone..... 1
——— Heart 18	Intestinal Ulcers .. 1	Syphilis..... 2
——— Kidney .. 7	Laryngitis 3	Tetanus 1
——— Liver 12	Metria..... 2	Typhus 10
——— Lungs 6	Mortification 4	Ulcer..... 2
——— Stomach .. 6	Nephritis 7	Violence 4
——— Uterus.... 3	Ovarian Dropsy 2	Not specified 15

Total..... 270

According to the above statement, nearly one-third of the entire mortality was produced by diseases of the respiratory organs; comprising 10 fatal cases of bronchitis, 10 of pneumonia, 6 of affections of the lungs, 3 of laryngitis, and 59 of phthisis; thus making, altogether, 88 deaths by these maladies. Hence, all the facts here recorded, entirely coincide with the observations contained in a previous page, and illustrate the great frequency of pectoral complaints throughout England; whilst they also indicate that consumption does not constitute a cause of exclusion from every general hospital of London, seeing, not less than 59 persons died of phthisis during last year, in this ancient charity; of whom 37 were male, and 22 female patients; whilst 115 left the institution more or less relieved, and four were reported cured.

The following table, respecting the age and social condition of the various individuals who recently died of consumption, in St. Thomas's Hospital, was drawn up from the register kept at this institution, and deserves perusal.

Table of Age and Social Condition of the 59 *Fatal Cases of Phthisis recorded in St. Thomas's Hospital during* 1850.

Thirty-seven Males.						Twenty-two Females.		
Age.	Single.	Married.	Age.	Single.	Married.	Age.	Single.	Married.
						18	2	..
				13	7	19	1	..
21	2	..	40	..	1	20	1	..
23	3	1	41	1	1	21	2	..
25	..	1	42	2	..	23	2	..
26	1	..	43	1	..	25	1	1
27	1	2	44	1	..	26	..	1
30	2	1	47	3	..	28	2	1
31	1	..	49	..	1	30	..	1
32	1	..	53	1	1	31	1	..
33	..	1	54	1	1	34	..	1
34	..	1	55	..	1	36	1	..
38	1	..	64	..	1	37	..	1
39	1	..				44	2	..
						59	..	1
	13	7		23	14		15	7

From the above figures it appears, that more single persons than married, in both sexes, died of phthisis; there being 38 of the former, to 21 of the latter; whilst about half the whole number, or 29 individuals, had not exceeded their thirtieth year at the period of death. Such peculiarities, especially in reference to age, seem to have been indubitably pronounced amongst female patients, as 15 of the 22 cases did not exceed 30 years of age; and of these 11 were single, with only 4 married women. On the other hand, out of the 37 male patients, not more than 14, or nearly two-fifths, were 30 years of age or under; of whom, 9 were single men, and 5 married. It may hence be fairly inferred, that consumption proves a more serious malady amongst young unmarried women, than among the married. At the same time, the disease seems to prevail also less frequently in the opposite sex similarly circumstanced; as 9 single men attacked, at or under 30 years of age, died from phthisis, in contrast to 5 who were married.

Another point in reference to hospital statistics also deserves notice, the more so as it illustrates, to some extent, the general features of most diseases affecting patients received into these public establishments; I mean the length of time during which sick inmates remained under medical treatment. This is an important question for inquiry; because, if any facts of that kind be correctly ascertained, professional men can, from such tables, confidently deduce inferences respecting the nature, whether acute or otherwise, of the chief complaints treated in the wards of a particular institution. In order briefly to illustrate the point adverted to, I subjoin a classified return of the exact period which all the 270 patients, who died in St. Thomas's Hospital during 1850, remained under medical or surgical treatment. The details it contains seem interesting, and merit examination.

Length of Residence in St. Thomas's Hospital, during 1850, *of the* 270 *Patients whose Diseases terminated Fatally*

88 Surgical Patients.				182 Medical Patients.			
M.	F.	Total	Time in Hospital.	M.	F.	Total	Time in Hospital.
6	1	7	Died day of entry	5	2	7	Died day of entry
4	5	9	Do. 1 day	5	4	9	Do. 1 day
4	1	5	Do. 2 do.	5	5	10	Do. 2 do.
1	..	1	Do. 3 do.	6	2	8	Do. 3 do.
..	1	1	Do. 5 do.	3	3	6	Do. 4 do.
3	1	4	Do. 6 do.	5	1	6	Do. 5 do.
7	8	15	Do. 1 week and under 2	4	1	5	Do. 6 do.
6	3	9	Do. 2 do. do. 3	14	13	27	Do. 1 week and under 2
6	2	8	Do. 3 do. do. 4	16	5	21	Do. 2 weeks do. 3
4	1	5	Do. 4 do. do. 5	13	6	19	Do. 3 do. do. 4
3	..	3	Do. 6 do. do. 7	7	6	13	Do. 4 do. do. 5
3	..	3	Do. 7 do. do. 2 months	2	6	8	Do. 5 do. do. 6
5	1	6	Do. 2 months do. 3 do.	6	5	11	Do. 6 do. do. 7
2	1	3	Do. 3 do. do. 4 do.	5	1	6	Do. 7 do. & under 2 mnts.
1	2	3	Do. 5 do. do. 6 do.	11	5	16	Do. 2 months & under 3
..	2	2	Do. 6 do. do. 7 do.	1	..	1	Do. 3 do. do. 4
1	..	1	Do. 7 do. do. 8 do.	..	2	2	Do. 4 do. do. 5
1	1	2	Do. 8 do. do. 9 do.	2	1	3	Do. 5 do. do. 6
1	..	1	Do. 11 do. do. 12 do.	1	1	2	Do. 6 do. do. 7
				1	..	1	Do. 7 do. do. 8
				..	1	1	Do. 8 do. do. 9
58	30	88		112	70	182	

Looking at the various data contained in this table, and taking the surgical patients in the aggregate, 27 persons, or 30·68 per cent. of the entire number, died under one week's residence in the hospital. Where the period did not exceed four weeks, 59 surgical patients, or 67·04 per cent., are reported to have died within that term. Again, in regard to medical cases, the ratio of mortality averages rather less at similar short periods; 51 deaths, out of the 182, having occurred under one week from the period of entry, which is equal to 28·02 per cent. Where the time of residence was under four weeks, the proportion, in that case, reached 64·83 per cent., seeing 118 out of the whole 182 patients treated by the physicians died before twenty-eight days had elapsed. The proportion of deaths amongst female surgical patients, whose treatment in hospital ranged under four weeks, actually reached a higher amount than amongst surgical male patients: this is shown by the fact, that 22 of the 30 deaths were classed in this category,—giving a ratio of 73·33 per cent; whereas, amongst the 58 male surgical patients who died before they had resided twenty-eight days in hospital, there were only 37 deaths, or 63·96 per hundred. This indicates that the particular maladies, in these cases, were neither so acute nor rapid in their course amongst men as women. The results recorded in medical patients, when residence in hospital did not exceed four weeks, proved, however, somewhat different, if the male inmates were compared with the opposite sex: thus, 76 of the 112

male patients who died during 1850, had not been under medical treatment beyond twenty-eight days,—thus making 68·03 per cent., whilst the number of casualties amongst female medical patients, similarly circumstanced, was 42, being at the rate of 60 per cent. From these facts, it is clearly indicated that diseases usually treated by physicians seem of a severer type, and become more rapidly fatal among men, than in maladies affecting women. Although the surgical cases ending fatally at St. Thomas's, were less numerous than the medical, a larger proportion of the former class remained longer in hospital before the fatal termination, than prevailed amongst the other division, where disease likewise terminated in death. Six surgical patients out of 88 had resided upwards of six months before death, whereas, only four individuals amongst the total 182 fatal cases in the medical ward, were under treatment for a similar period. Again, the average number of beds occupied nightly by sick persons, amounted to 446, throughout the whole period referred to in previous pages; whilst five weeks and four days constituted the mean time during which each inmate continued in the establishment.

Besides these general statements,—possessing considerable interest, it is also instructive to remind readers, that the mortality reported amongst surgical patients of every description, treated at St. Thomas's Hospital, ranged about four per hundred, compared with the admissions; contra-distinguished to which, the ratio of persons affected with medical diseases,—also proving fatal, was more than double that amount, or fully ten per cent. if calculated in the same manner; thus explaining several results of an important character, and nearly analogous to those experienced, at almost every other similar medical institution, throughout the metropolis.

24, Brook Street, May 1851.

BIBLIOGRAPHICAL RECORD.

Practical Remarks on the Treatment of Aneurism by Compression with Plates of the Instruments hitherto employed in Dublin, and the recent Improvements by Elastic Pressure. By Jolliffe Tufnell, M.R.I.A., Fellow of the Royal College of Surgeons in Ireland, Surgeon to the City of Dublin Hospital. pp. 154. Dublin : 1851.

In this little work, Mr. Tufnell gives the results obtained in Dublin from the treatment of Aneurism by Compression ; and his conclusions are altogether in favour of the new practice. The number of cases reported to have been treated in Dublin, by compression, from October 1842 to March 1851, is thirty-nine ; and, of these, "thirty have been completely cured. In one, compression was discontinued, the aneurism not increasing subsequently in size ; in two, the ligature was resorted to, and the artery tied, with success ; in three, amputation was necessary, each instance being followed by recovery ; in one case, death ensued from erysipelas ; and two died from coexisting disease of the heart." The author expressly informs us that this summary comprises *all* the cases of aneurism treated by compression in the Irish metropolis ; and that therefore it is untrue to allege that the Dublin surgeons have put forth only the favourable, and concealed the unfavourable, cases ; and Mr. Tufnell tells us, moreover, that, in only *one case* (namely, one in which erysipelas supervened) could death be in any way attributed to compression. Now, in contrasting these results with the records of cases in which the ligature has been employed, the success of the new practice is still more clearly manifested. In the work of Dr. Crisp, for instance, the particulars of one hundred and eighty-eight cases are detailed, of ligature of the artery for popliteal or femoral aneurism ; and of these, thirty-five died from the effects of the operation ; eleven recovered after suffering subsequent amputation ; two recovered after sloughing of the sac ; one recovered after mortification of the toes ; and one after sloughing of the integuments : so that more than the fourth of these cases either terminated fatally, or were maimed for the rest of life. Again, Mr. Phillips has collected one hundred and seventy-one cases of aneurism affecting the lower arteries which were submitted to the ligature ; of these, fifty-seven, or one in three, were unsuccessful ; and all these patients died, except two, not of the disease, but of the operation. The third table is afforded by Mr. Norris, who gives the details of one hundred and seventy-seven cases where the operation was performed. Of these, thirty-eight died from the effects of the operation ; six recovered after subsequent amputation ; ten recovered after suppuration of the sac ; and two after gangrene of the foot,—making nearly one out of every three cases, which either terminated fatally, or were, to a certain extent, maimed for the rest of their lives. This evidence is undoubtedly very strong ; and we cannot wonder at the stress which is laid upon it by Mr. Tufnell.

The author very justly remarks, that there is really no difference between the mode of cure by the ligature, and that performed by compression ; for in each instance the current of blood is arrested, and the impulse of the heart no longer communicated to the sac of the aneurism ; and he maintains that compression is equally efficacious with the ligature, when the former is *properly* and *cautiously* applied.

In answer to the objection, that the cure by compression is prolonged and tedious, Mr. Tufnell admits that twenty-five days may, perhaps, be granted as the period for the treatment ; but he argues that the operation by ligature requires, on the average, nearly an equal space of time. Thus, from the moment of the patient's admission into the hospital, until he is placed

upon the operating-table, a week may be allowed. Sixteen days may be taken as the usual period between the application of the ligature and its separation; and five days more may be granted for closure of the wound, and cicatrization; thus making the time quite as long as in the cure by compression. But, in many cases, the cure by compression occupies a much less time; thus, in certain instances adduced by Mr. Tufnell, the process of cure occupied only *twenty-eight hours* on the average; and, in one case, only *seven hours and a half* were required for total solidification of the contents of the sac, and in a very brief period the patient was again at his usual occupation. In another case, a femoral aneurism was solidified in thirty-three hours. Ten days after, the man left the hospital; and *he was married, and danced at his own wedding, within three weeks from the day that pressure was first applied.*

The instruments which have been, and are now used, for compressing the artery, are described in the work before us; and their form is figured in several plates in the course of the volume. It is impossible to convey, in words, any accurate idea of the apparatus employed by Mr. Tufnell; suffice it to say, that it is sufficiently simple, and that without compressing the limb itself, a pad is made to press precisely upon the artery by turning a screw. The elastic force of vulcanized India-rubber is happily employed to supersede the former methods of pressure by metallic unyielding materials; and Mr. Tufnell justly lays great stress upon the importance of this improvement.

The previous treatment of the patient demands notice; and Mr. Tufnell recommends, in the case of a hyperæmic muscular subject, that the action of the heart should be reduced by restricted diet, purgatives, venæsection, and sometimes digitalis; but in an anæmic weakly patient, that a tonic plan should be adopted. The patient having been thus prepared, the apparatus is adjusted to the groin, and the long screw of the instrument is directed obliquely upwards *over the femoral artery* as it passes below Poupart's ligament, and *against* the pubic bone. "This spot", says Mr. Tufnell, "of all in the lower extremity, is the one most suited for compression. Here no nerve is in close apposition to the artery, and the vein is easily avoided by care. Being also superior to the profunda, it is the most fitting point for compression, and effectually arresting the circulation, when employed in those cases of popliteal disease, where symptoms of burning pain in the joint indicate that the aneurism has its origin from the surface of the artery nearest to it, and when the circulation should consequently be diminished as speedily as possible, and to the utmost degree." The pad being placed in position, looking backwards and upwards to the pubis, is to be brought, by the screw, in contact with the skin; then the elastic force is made to bear upon the vessel, and the pressure is to be continued until the pulsation in the tumour is completely checked *to the touch*. Two or three hours will then probably elapse before the patient feels annoyance from the pad, but Mr. Tufnell recommends that the surgeon should not wait until the patient complains of pain, but that, as soon as uneasiness is felt, another apparatus, fitted for compressing the artery in the thigh, and which should be previously loosely applied, should be brought into operation. By these means the circulation is completely arrested. Mr. Tufnell gives the following rule on this point: "Make your command over the circulation complete, but with the minimum amount of pressure by which this object can be gained." In irritable constitutions, where the patient is intolerant of the pain caused by compression, an anodyne draught may be administered. A very good instance of the beneficial effect of anodynes is given in a case occurring in the practice of Dr. Banin. The man had been four days under treatment, and for three nights had not slept, although full opiates had been employed. The instruments, therefore, were loosened, and the man almost immediately fell asleep; but the resident pupil in attendance seized the opportunity of

placing Dr. Carte's instrument upon the artery without waking the patient; and at the end of six hours all pulsation had ceased in the tumour, and it never returned.

Such is an outline of the treatment of aneurism, by compression, practised and recommended by Mr. Tufnell; and we cannot but remark that the results, given in this little volume, have impressed us with a very favourable opinion of this plan of proceeding; and we shall rejoice to find that the success of the system in this country is equal to that which has been achieved by our surgical brethren on the other side of the Irish channel.

Observations on the Diseases of the Rectum. By T. B. Curling, F.R.S., Surgeon to, and Lecturer on Surgery at, the London Hospital. Post 8vo. pp. 123. London: 1851.

Mr. Curling has already earned an excellent reputation as a practical surgeon; and the work before us is well calculated to sustain him in the opinion of the profession. It has unfortunately happened that, with a few honourable exceptions, the rectum has been made a sort of preserve for the especial benefit of gentlemen of the quackish persuasion:—and well stocked has it been with game! There was a story current some years ago of a certain practitioner, in the West of England, who deluded every patient into the belief that he, or she, had stricture of the rectum, and that his gigantic bougie alone could cure them. A certain damsel, daughter of a gallant colonel, consulted Mr. H—— for some trifling dyspeptic ailment, and was speedily informed that she had a formidable disease—in fact, a stricture of the rectum, for which a special course of treatment would be necessary. Shocked, and distressed beyond measure, the young lady hurried home, and communicated the intelligence to her mama. Early on the following morning the colonel was seen, armed with a stout horse-whip, knocking at the door of Mr. H.; but in about half an hour he was observed to leave with a very crest-fallen and nervous air. The fact came out, that the doctor had persuaded Colonel —— *that he too had stricture of the rectum!*

The first object worthy of notice in the work before us, is a very useful speculum invented by the author. It is of a conical form, with a wide gap in the side, extending nearly to the extremity; and fitted with a moveable ebony plug, having a metal plate which perfectly closes the aperture. We consider this extremely well adapted for making examinations of the lower bowel; and by its assistance the true nature of many obscure and troublesome cases may be ascertained, and measures directed accordingly.

Mr. Curling considers chloroform to be a valuable auxiliary in the treatment of diseases of the rectum. "Under its influence the irritable sphincter relaxes, and a complete view can be had of the seat of disease in cases where pain and spasm would otherwise offer almost insuperable obstacles to a satisfactory exploration" (p. 4).

To that painful affection commonly called a *fissure* of the rectum, Mr. Curling applies the name of irritable ulcer. The usual seat of this is in the pouches of mucous membrane, just within the external sphincter. The appearance of a fissure is, in fact, delusive; for it is a superficial oval ulcer, exquisitely sensitive, and giving rise to the most distressing suffering. This is much more common in women than in men. It is seen with difficulty, on account of the spasm which firmly closes the orifice. Chloroform is here invaluable; and with its aid not only can the disease be satisfactorily examined, but easily cured. The treatment necessary is a longitudinal incision through the centre of the ulcer, including the sphincter muscle; by which means this, the great source of mischief, is placed at rest, and the ulcer heals. The healing process may often be promoted by coating a plug of lint with the following application; ℞ Liquor plumbi diacetatis ʒj, confec. rosæ ʒj. M. The plug smeared with this ointment is dipped in sweet oil, and then applied to the part.

As an application to sensitive ulcers of the rectum, Mr. Curling strongly recommends the following ointment, which is also useful in painful affections generally. ℞ Chloroformyli ʒi,—ʒij ; zinci oxydi ʒss ; olei olivæ ʒj ; cerat. cetacei ʒiv. M. Ft. unguentum.

A very clear description is given of the nature of those troublesome companions, *hemorrhoids*, which, says Mr. Curling, "rarely occur before puberty, and which but few persons in after-life altogether escape". In external piles, if palliative treatment does not avail, excision is recommended. In cases of internal piles, the author speaks highly of the benefit derived from a lavement of half a pint of cold spring water thrown into the rectum every morning after breakfast. As an aperient, the lenitive electuary, with sulphur, or the bitartrate of potass at bed-time, is very serviceable. If in these cases the piles are a source of great annoyance, operative proceedings must be had recourse to, and the ligature is strongly recommended.. A dose of castor-oil, he says, should be given eight hours before the time fixed for the operation, and a pint of warm water should be thrown up shortly before the surgeon's arrival. When the fluid is discharged the piles will descend. If chloroform be given, the patient should be placed on the side with the thighs raised ; otherwise, the patient should lean over a table with the nates separated. The growth should then be drawn out with a volsellem, and tied tightly around the base, or strangulated with a needle and ligatures. It is well to bear in mind that retention of urine is occasionally the result of this operation. In a case which recently fell under our own observation, a catheter was required night and morning for a fortnight.

The following is the summing up of Mr. Curling's opinions relative to the tying of piles.

"The extirpation of hemorrhoids by ligature is both an effectual and a safe mode of treatment, and the use of chloroform removes almost entirely the pain attending it. Those adverse to the plan have magnified the risks and sufferings, and have spoken of phlebitis and tetanus, and diffuse inflammation, followed by sloughing, as common occurrences after the operation. No fatal case has come under my notice, either in public or private practice. .... An unfortunate result from the application of ligatures to piles is entirely exceptional : and, with common precaution, this proceeding must be regarded as safe as any operation in surgery" (p. 41).

The treatment of hemorrhoidal tumours by strong nitric acid is sometimes very appropriate. The conditions to be observed with regard to the operation have been well laid down by Mr. Henry Lee of King's College Hospital.[1]

Mr. Curling's observations on fistula in ano, chronic ulceration, stricture, and cancer of the rectum, are all based on sound judgment and extensive experience. The work, indeed, bears the stamp of these high recommendations, and contains much sound information respecting a painful, often intractable, and always very distressing class of diseases.

Apology for the Microscope ; being the Introductory Lecture to the First Course on Microscopic Anatomy and Pathology, delivered in the Theatre of the Original School of Medicine, Dublin. By Robert D. Lyons, M.B., T.C.D., L.R.C.S.I. pp. 45. Dublin : 1851.

We should have imagined that the microscope needed no apology from a teacher of the medical faculty in the Irish metropolis ; but we regret to learn, from a perusal of this lecture, that microscopical research is by no means, at present, a favorite pursuit with either professors or students in the sister island. This production of Dr. Lyons is a very eloquent appeal to his professional brethren in behalf of a branch of investigation which, it appears, they have too long neglected ; and we shall be happy to learn that

[1] London Journal of Medicine, vol. for 1849, p. 92, quoted from *Medical Gazette*.

his exertions are crowned with success, and that the reproach is thus removed from the Irish school. The history of microscopical discovery is very luminously described in the lecture before us, and due honour is awarded to the labourers in this fertile and inexhaustible field. We sincerely wish Dr. Lyons the success which he merits, and hope hereafter to see his name recorded among the successful cultivators of this fascinating department of natural history.

Phthisis and the Stethoscope. A concise Practical Guide to the Physical Diagnosis of Consumption. By Richard Payne Cotton, M.D., Assistant-Physician to the Hospital for Consumption and Diseases of the Chest. pp. 97. London: 1851.

The present work—already favourably noticed in this Journal—appeared in the form of six lectures delivered at the Brompton Hospital, and published in the *Medical Gazette*. The author modestly announces that the matter, which his pages contain, "is not intended to supersede any of the larger works upon physical diagnosis, but is merely designed for the use of those whose professional duties require that such matters should be studied, rather in abstract than in detail".

In the first chapter the general characters of the healthy chest are described; the physical symptoms of the first stage of tubercle are detailed in the second, third, and fourth chapters; the third chapter is occupied by the signs attending the second stage of phthisis; and the last chapter is devoted to the consideration of the third stage of the disease.

The whole work is what it professes to be, a concise practical treatise on the insidious and fatal disease of which it treats. The author has had extensive opportunities for observing the symptoms and progress of phthisis; and the results of some of his investigations are now instructively communicated to the profession.

Conspectus Medicinæ Theoreticæ, capita quadraginta tria universa complectens, ad Usum Academicum. Auctore Jacobo Gregory, M.D., olim Med. Theor. nuper Med. Pract. in Acad. Edin. Prof. Editio undecima, omni parte perfecta, prioribus emendatior. pp. 433. Edinburgi: 1850.

Criticism upon a work so well known and so highly appreciated as Gregory's Conspectus is quite superfluous; it is sufficient to welcome the eleventh edition with the remark, that the work, in the elegance of its Latinity, the extent of its learning, and the soundness of its practical views, is one of the most useful and most important of the modern classics. The present edition contains nothing more than the Latin text. It is well printed and carefully edited.

The Book of Almanacs: with an Index of Reference, by which the Almanac may be found for every year (whether in Old or New Style) from any Epoch, Ancient or Modern, up to A.D. 2000. Compiled by Augustus de Morgan, Sec. R.S.A., Professor of Mathematics in University College. London: 1851.

This is a most interesting, and a most extraordinary work. It is correctly described in the title-page, which we have transcribed.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS

PRACTICE OF MEDICINE AND PATHOLOGY.

ILLUSTRATIONS OF FATTY DEGENERATION OF THE HEART: CASES OF THE REVEREND DR. CHALMERS AND DR. ABERCROMBIE.

Dr. Begbie in a valuable paper on this subject, in the *Edinburgh Monthly Journal* for March 1851, relates the following particulars of the last illness of the Rev. Dr. Chalmers, and of Dr. Abercrombie, and the appearances observed after death They will be read with much interest, as well on account of the nature of the fatal affection, as the great and deserved celebrity of its victims, and the close resemblance presented, in many points, by the symptoms.[1] We have considerably abridged Dr. Begbie's essay.

Case I. Dr. Chalmers died in his sixty-eighth year; and was often seen by Dr. Begbie during the last fifteen years of his life. To a mind of the highest order, and of wondrous energy, he united a hale and vigorous, a manly and robust, frame of body; and he spared no exertion, either mental or physical, in endeavouring to benefit his fellow-men. He was hardly ever incapacitated by infirmity, or loss of health, in prosecuting his enterprises; and in them up to his latest hour, he toiled, and spent his energies and his strength. These things show, that the fatal disease which lurked within, which was progressive in its nature, and probably of long-standing, could neither have produced serious uneasiness, nor proclaimed its presence by any unequivocal signs. One alarming illness, it is true, overtook him some years before his death; and though we can now connect that first indication of disordered circulation with a well-grounded suspicion of commencing cardiac disease, yet his perfect recovery, and the absence ever afterwards of any similar manifestation, were calculated to repress all apprehension of danger. The attack happened in the winter of 1834, thirteen years before he died. It was thus:—He was engaged in the early part of the day in attending a meeting of the Presbytery of Edinburgh, and had taken an interest and a share in the discussions. When returning home with a friend, he was suddenly seized, in the street, with loss of power and diminished sensation over the right side; the arm and leg being chiefly affected. He felt, to use his own description, as if instantaneously a large weight of books had been placed in one of the pockets of his great-coat, and had thrown him entirely to one side. He would have fallen to the ground, but his friend supported him, and had him conveyed to a neighbouring house, and, after a little, to his own home, whence Dr. Begbie was called to see him immediately on his arrival. Dr. Begbie found him in bed, calm, but impressed with the conviction that he was struck down by a formidable disease. His mind was quite entire; nor did it suffer in the least during his illness. His speech was somewhat affected, and his articulation was imperfect. The muscles of the right side of the face were partially paralysed; those of the arm and leg decidedly so. Sensation over the whole of the right side was much impaired, and particularly over the thigh and leg, which he continued to beat firmly with the left hand, in the hope, as he said, of recalling sensation. The face was pale, the skin cool, the pulse soft and frequent. There was no headache or giddiness, nor any pain or uneasiness beyond what has been described. The treatment pursued was moderate bleeding, purging, diaphoretics, rest, and quiet. Under this, he daily improved; sensation and motion were gradually restored, and, after a few weeks' confinement, he returned to his avocations,

[1] An excellent Life of Dr. Chalmers is in course of publication by his accomplished son-in-law the Reverend Dr. Hanna, of Edinburgh: a Biography of Dr. Abercrombie is still a desideratum.

and engaged as heartily and laboriously as ever in his literary and professional duties.[1]

Important events in the church by and bye occupied his mind ; and negotiations, connected therewith, pressed upon his attention year after year. He was found equal to the time. Perhaps these matters told upon him. He was now approaching his grand climacteric, yet he was firm and robust. With accumulating years came a disposition to obesity, and also the pallid and somewhat sickly look of fading health. Yet he seldom complained ; or, if indisposed, it was only by some trivial ailment arising from indigestion. He was sometimes sick at stomach, but he was never faint, nor ever swooned away. He sometimes manifested a sense of exhaustion ; but even then he could, when occasion required, rouse himself to great mental or bodily efforts. He had no præcordial pain, nor distress in breathing ; no palpitation of the heart, nor intermission of the pulse. He ascended heights with wonderful facility ; he slept on either side, and his rest was calm and refreshing. Had any symptoms at this time called for exploration of the chest, it might perhaps have been discovered that the impulse of the heart was feeble and indistinct ; and that its first sound was imperfectly heard : and by conjoining these signs with the soft, but not feeble pulse, the pallid countenance, the time of life, and the ready disposition to take on fat, degeneration of the muscular tissue might have been supposed to have already made progress. But this could only have been a reasonable conjecture.

Early in May 1847, when in the enjoyment of his usual health, Dr. Chalmers repaired to London to give evidence before a committee of the House of Commons. He preached on three successive Sundays with all the eloquence and energy of former days ; and during the week was much engaged with the business of the committee, shewing no symptoms of serious illness. On his way home, he visited some relatives in the south of England, and reached Edinburgh at the close of the month, in excellent health and spirits. He attended public worship on Sunday the 30th, and met his family in the usual exercises of the day. He retired to rest at an early hour ; being engaged on the following day to read to the General Assembly a report, which had occupied much of his time and thoughts. On Monday the 31st, not having responded to the usual call in the morning, his chamber was entered, and he was found cold and lifeless. Dr. Begbie saw the body before it was disturbed. It lay in the half-recumbent posture ; the head supported by pillows ; the arms folded on the breast. The bed-clothes were scarcely disordered ; and on them rested a basin, which had received the contents of the stomach. He had been overtaken by sickness and vomiting ; but at what hour it is impossible to fix. This last circumstance of vomiting, coupled with his former paralytic attack, rendered it very probable that some cerebral lesion was the cause of death.

Necropsy. The examination of the body was conducted by Dr. Hughes Bennett on the evening of the following day, the 1st of June. The weather was unusually sultry.

External Appearances.. The body was fat and robust ; the head large ; the chest broad. Putrefaction had taken place to a considerable extent. The features were swollen, bloated, and of a purple colour. The neck and upper part of the chest were of a green colour, and emphysematous.

Head. The integuments of the scalp were unusually thick ; on dividing them, fluid blood oozed from their cut surfaces. The cranium was very thick and dense. It was every where fully a quarter of an inch thick, and in some places three-eighths of an inch ; it was unusually weighty. The two surfaces of the arachnoid membrane were pretty firmly united superiorly, and were lacerated on separating the brain. The angle where the falx turns

[1] During the month of June following, Dr. Chalmers apprehended a renewal of similar symptoms ; but the threatened attack passed away, and never returned.

down was crossed on both sides, from before backwards, by firm bands of chronic lymph and fibrous tissue, some of which were nearly an inch long. A calcareous deposit, the size of a pea, was situated about the centre of the falx. The cerebral arachnoid was thickened, and perfectly opaque in the immediate neighbourhood of some of the larger meningeal vessels, presenting, on removal, a white glistening appearance; it was easily removed from the cerebral convolutions, which, superiorly, were large, and the sulci deep. The brain weighed fifty-three ounces avoirdupois. Its structure was everywhere healthy. The choroid plexus contained small groups of simple cysts. A large quantity of fluid blood came from the divided arteries at the base of the brain.

Chest. Each lung was slightly adherent at its apex by one chronic adhesion of limited extent. On the left side, the pleura at the seat of adhesion was thickened, over an extent the size of a shilling, about one-eighth of an inch. The serous surfaces and lungs were otherwise perfectly healthy. The pericardium was healthy. The heart was flabby, and unusually soft. The coronary artery was loaded with calcareous deposit, much contracted, and in one place obliterated, presenting considerable resistance to the knife. The heart contained no blood; its endocardial lining was deeply stained of a reddish and purple colour; the valves were healthy. The walls of the left ventricle, towards the base, and at their thickest part, were only half an inch thick; at the apex, in one place, only one-eighth of an inch thick; the surface of the section showed that the muscular substance had undergone fatty degeneration. In some parts of the ventricle, half the substance was completely fatty; in other parts, nearly its whole thickness was fatty, with a line of muscular substance, one-sixteenth of an inch thick, only remaining. Even this muscular substance was of a pale and yellowish colour. The right ventricle was unusually thin, and superiorly was so soft, that it broke down under the finger, and could be torn like a soft pulpy substance. Everywhere the substance of the organ was soft and friable.

Abdomen. The liver was small, of a dirty olive-green colour throughout. The gall-bladder was distended with yellow fluid bile. The spleen was small; on section, it presented a black colour. The omentum and subperitoneal cellular tissue were greatly loaded with fat. The kidneys were imbedded in a surrounding mass of fat an inch thick, they were soft and flabby, of a dark mahogany colour, but in texture healthy. The stomach, internally towards the larger curvature, was of a greenish hue, with slight extravasation of blood below the epithelium. The intestines were healthy.

Microscopic Examination. The substance of the heart throughout consisted of fatty granules. The muscular fasciculi could scarcely be seen, although here and there traces of the longitudinal fibrillæ could be observed. No transverse striæ were anywhere visible.

Dr. Hughes Bennett suggests, as the probable cause of the want of blood in the heart, that it had drained away, in its putrid state, from the divided cerebral vessels, during the examination of the contents of the cranium.

Case II. Dr. Abercrombie died in his sixty-fifth year. He enjoyed, during a long series of years, uninterrupted health. In the winter of 1841, three years before his death, in driving to a professional engagement, he was suddenly seized with loss of power and impaired sensation over the left side, but without loss of consciousness or any affection of speech. He immediately returned home, and gave orders for the abstraction of blood by cupping. Dr. Hunter, who was called to him, found him under great anxiety, complaining of præcordial uneasiness, and slight headache, with frequent sighing, cold skin, and pallid countenance. The pulse was frequent and small at first, but, after a while, it subsided in frequency and rose in strength. Blood was taken from the temple and arm to a large extent, and active purging was pursued by the patient's desire. The details of this attack have been given

elsewhere. It was Dr. Abercrombie's decided impression that his illness was paralysis, connected with cerebral disease, and that impaired mental and bodily power would be the lasting consequences. It certainly never occurred to any of his medical advisers to connect the symptoms with deranged circulation, arising from a damaged heart. He did complain of præcordial uneasiness—it never amounted to pain—and of something more than uneasiness in the left arm and shoulder, and at the base of the scapula; but the circulation was regular, though feeble, and the feebleness might readily have been accounted for by the active measures which he himself employed, and the scanty fare to which he subjected himself,—treatment which no long time afterwards was found to have been entirely misplaced.

Dr. Abercrombie recovered from this attack; and in the course of a few weeks was able to resume his professional duties. He continued pallid, however, and had somewhat the air of an invalid, but his mind was as active and intelligent as ever. Previous to this attack, he had become rather corpulent and fat. He never had any threatening of return of similar symptoms during the three succeeding years, nor any indication of latent disease, beyond what was remarked by Dr. Alison, when, in accompanying him up stairs a few days before his death, he observed that he was breathless. On Thursday, the 14th of November, 1844, Dr. Abercrombie was in his usual health; he engaged with his family in the devotional duties of the morning; he breakfasted with appetite, and, after visiting a domestic in the family, he retired to the water-closet. He was there sufficient time to justify the suspicion that some illness had overtaken him; and, on opening the door, he was found extended on the floor in the arms of death. A few convulsive sobs were heard,—and life departed.

Necropsy. The body was examined by Mr. J. Goodsir, who gave the following account of the morbid appearanes.

Head. The skull-cap was thick. The crista galli, the posterior clinoid processes, and the bones of the head generally, were powerfully developed. The brain was softer than might have been expected at the time of the examination (fifty hours after death). There were no traces of old or recent effusions of blood. The internal carotid, the circle of Willis, and all the arteries of the organ were studded with much atheromatous deposit; and the internal carotids, at their last curve, were slightly dilated. The brain was of great size, and weighed sixty-three ounces avoirdupois. The ventricles were capacious, without an increased amount of serum, which appeared to correspond to the great size of the cavities.

Heart. The pericardium contained a large clot of blood, enclosing the heart as a mould. On the posterior surface of the left ventricle, two-thirds from its base, and about an inch and a half from the septum, there was a fissure or rent, a quarter of an inch long, in the direction of the fibres of the ventricle, with ragged and ecchymotic edges. Towards this fissure, a considerable branch of the left coronary artery passed, but did not enter into it. In the fissure the ruptured orifice of a vein was visible, and a bristle introduced into it passed on towards the base of the ventricle, and appeared on the cut surface of the posterior wall of the ventricle, made on opening the heart. In the neighbourhood of the rupture two irregular ecchymotic spots were situated, through which passed branches of the coronary artery. These spots consisted of effused blood, but their connexion with ruptured vessels could not be distinctly made out. The serous membrane over them was quite entire. Both coronary arteries were much dilated as they passed off from the aorta. Throughout their course they contained in their walls much atheromatous matter, but were not ossified. The aorta and its semilunar valves also contained a considerable amount of the same deposit, but the former was not enlarged. The heart was slightly enlarged and dilated, rather loaded with fat, and remarkably soft, as if from interrupted nutrition. All the cavities of the heart were found empty. There

were extensive adhesions of the right pulmonary and costal pleuræ. The other viscera were healthy.

Mr. J. Goodsir made a microscopic examination subsequently to the drawing up of his report of the inspection of the body, from which it appeared, that the muscular fibres of the ruptured portion of the ventricle (alone examined) had undergone the fatty degeneration, being here and there interspersed with fatty granules, generally in transverse rows,—and that there were masses of fat cells or globules at intervals,—while some of the fibres were nearly empty.[1]

Remarks. Dr. Abercrombie and Dr. Chalmers were both of the age when the tendency to fatty degeneration has been shewn to be most prevalent. Among 83 cases collected by Dr. R. Quain,[2] death occurred in 14 between the ages of 50 and 60 ; in 18, between 60 and 70 ; and in 14, it occurred between 70 and 80. These eminent men had also indicated a proclivity to the disease by a constitutional tendency to take on fat, and in doing so, to assume the pallid and sickly look of diseased nutrition,—facts which have been remarked by many observers. They terminated their lives in the manner most common to those who suffer from it, the one by rupture of the heart, the other in syncope. Of Dr. R. Quain's 83 cases, 28 died in the former, and 26 in the latter mode.

Mr. Paget has remarked, that the principal character which all the cases of fatty degeneration of the heart seem to present, is, that they who labour under this disease are fit enough for all the ordinary events of calm and quiet life, but are wholly unable to resist the storm of a sickness, an accident, or an operation. There may be much general truth in the statement; and in the two cases just recorded, it is worthy of remark, that up to the hour of death the individuals were actively engaged in the labours of most arduous professions, and were overtaken, as in other recorded instances of this particular lesion :—the one, it is believed, by the act of vomiting ; the other, by an effort at stool.

Dr. R. Quain, in referring to the fact that fatty degeneration of the heart is said to be frequently found after death, where its existence had not been suspected during life, has expressed the opinion, that such cases would not often be met with, if a full inquiry could be made into their symptoms; and then goes on to remark :—" I feel the truth of this observation, more particularly in those cases which occur in the progress of advancing life, when, whilst the system generally keeps up its powers tolerably well, the heart suffers from some local cause, such as diseased coronary vessels. In those cases the balance between the system and heart is lost, and phenomena as clear and as pointed as any that can indicate the nature and seat of disease are developed."

What reply do the two cases now related make to this unqualified statement ? The subjects of these cases had made progress in advancing life. They expired in a sudden and unexpected manner; and examination after death disclosed the hidden cause, in the peculiar lesion of the heart, accompanied by the morbid condition of its vessels, to which Dr. Quain refers; yet, during life, neither of them exhibited any of those clear and pointed phenomena to which he alludes. The testimony of Dr. Abercrombie is peculiarly valuable in relation to this point; he never acknowledged, and probably never felt, any of those symptoms of degeneration of the heart indicated by

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[1] For more ample details of Dr. Abercrombie's case, vide an interesting memoir in the *Edinburgh Monthly Journal* for Dec. 1844, and a similar article in the *Edinburgh Med. and Surg. Journal* for January 1845.

[2] Quain, Dr. Richard, in *Transactions of the Royal Med. and Chir. Society*, vol. xxxiii, p. 121. London: 1850; also London Journal of Medicine, July 1850, p. 705.

Dr. R. Quain,—symptoms which seem more intimately connected with those other morbid conditions and lesions of the organ which usually coexist with fatty degeneration.

Let us shortly inquire what those signs, general and physical, are, which are said to denote this degeneration of the heart, with the view of discovering any modification of their features in the history of the cases now under consideration.

1. First in order, have been mentioned symptoms of cerebral congestion, such as *giddiness*, *drowsiness*, and *coma*. No symptoms of this kind were at any time witnessed; and though manifestations of interrupted circulation in the brain might have been expected to flow from the want of muscular power in the heart to propel the blood brought by the veins from the head; yet, if we except the attacks above described, there were no symptoms which pointed to early changes in the muscular fibres of the heart. It is difficult to account for the exemption from future attacks which both patients experienced, the one during the three, the other during the thirteen, last years of life.

The occasional occurrence of apoplexy and palsy, in connexion with fatty degeneration of the heart, may more readily be traced to other morbid conditions of the organ, which coexist with that particular degeneration, than to the degeneration itself, such as hypertrophy of the left, and dilatation of the right, ventricle; more especially when these again are associated with disease of the blood-vessels of the brain.

2 *Faintness* and *syncope* are next recorded as symptomatic of fatty degeneration of the heart; but they were not observed in either of the cases now related, though there is reason to believe, in the absence of other causes to account for death, that a fatal syncope at last overtook the distinguished individual who is the subject of the first sketch. But syncope is not an uncommon symptom of other affections of the heart, and may naturally be expected to arise where the left chambers of the organ are deficient in muscular power in transmitting the blood to the brain, whatever may be the immediate cause of this loss of power, whether the growth of fat upon the organ, the degeneration of its muscular tissue, or the dilatation and thinning of its walls from other morbid changes. It has been observed, that the peculiar degeneration we are now considering, is at times confined to one ventricle, and at other times to its fellow, and that often both are equally affected. May not the prevalence of head-symptoms at one time, and of syncope and faintness at another, be accounted for by the part of the organ implicated? When the right ventricle is softened and wasted, comatose symptoms may be looked for, in consequence of the interruption to the free discharge of blood *from* the brain: when the left ventricle suffers, then syncope may be expected, from the want of full and free circulation *within* the head; while, when the chambers of both sides equally participate in the degeneration, the circulation may be feeble and slow; but it will not be liable to those disturbances which are likely to arise from the balance of power being lost between the two sides of the heart.

3. *Shortness of breathing* is a symptom frequently observed in those labouring under fatty heart; but it was not present in either of our cases. It has been already remarked, that Dr. Chalmers continued to the last to ascend heights with wonderful facility; and Dr. Hunter informs me, on the best authority, that Dr. Abercrombie, during the autumn which preceded his death, was in the habit of ascending the hills in the neighbourhood of his summer residence, without experiencing any difficulty of breathing; and all, who were accustomed to meet him professionally, must remember the quick and alert manner in which he mounted to the bed-room floor, in cases of sickness. It has, however, been noticed, that an experienced observer had, on one occasion, and that a few days before his death, remarked that, in ascending the steps of his own house, Dr. Abercrombie was breathless. It

was the first and the only remark of the kind; and perhaps it is right to mention, that it was made at a time when Dr. Abercrombie was recovering from a bronchial attack, which had confined him for a day or two to the house. But we must expect dyspnœa in cases of softened and degenerated hearts; it is not, however, a constant symptom, and, even when present, may be found to be connected with other coexisting hindrances to the free circulation through the lungs.

4. *Præcordial pain* is another of the characteristic symptoms of this disease of the heart; and certainly has been acknowledged by many who have fallen victims to it. But it is a remarkable fact, that in the case both of Dr. Abercrombie and of Dr. Chalmers it was entirely wanting. The former was sensitively alive to every morbid feeling; the latter was not indifferent to suffering, but, with the exception of the præcordial uneasiness which for several days affected Dr. Abercrombie during the illness which we have referred to as occurring three years before his death, he was never known to complain of pain, nor had he at any time the least suspicion that he was the subject of cardiac disease; while, in the instance of Dr. Chalmers, I cannot call to recollection the smallest complaint of pain, anxiety, or distress in the region of the heart. Both had the coronary vessels extensively diseased; but neither suffered the symptoms of angina pectoris, unless it were in the moments which preceded dissolution.

5. *Functional derangement of the liver and chylopoietic organs* has been noticed as a constant attendant on this form of heart disease. Hasse informs us that, so far from being a merely local morbid condition, as some pathologists believe, it is the result of various affections in other organs; and, though not manifested by any specific local symptoms, its presence may, nevertheless, be inferred with tolerable certainty from collective symptoms referable to other parts of the body. Thus he mentions that, in functional disturbance of the larger organs of secretion, and especially of those engaged in the elaboration of venous blood, we meet with fatty encumbrance of the heart in its second stage; the anormal condition being then conjoined with other changes, all dependent more or less directly upon hepatic or pulmonary disease, or, at any rate, indicative of venous plethora.[1] Various morbid conditions of the liver are noticed among the collected cases of Dr. R. Quain; and in the instance of Dr. Chalmers this part was also found diseased. It was the organ, especially in his later years, which was most readily disturbed, being quickly influenced by errors in diet, or by stimulating beverages; hence he was led to abandon the use of wine and fermented liquors, and to confine myself entirely to water. An interesting fact in his history, which he communicated to Dr. Begbie, bears upon this subject,—namely, that the continued use, for a few weeks together, of a mixture of spirits, water, and sugar [*toddy* ?], was invariably attended with a manifest increase of fat, which subsided on the disuse of the stimulating drink. This fact, taken in connexion with the circumstance of fatty heart being frequently found in those addicted to the free use of spirits, may lead to the suggestion of prophylactic measures in the case of those who appear to labour under that disease.

6. *The state of the pulse* cannot be depended upon as a diagnostic mark of fatty heart. In some cases it has been found irregular, in some weak, in others slow; but it is subject to much variety, according to the complications of cardiac disease which concur with this degeneration of the muscular fibre. In both Dr. Abercrombie and Dr. Chalmers the natural pulse was soft and weak; it was never irregular, nor at any time of such a character as to raise any apprehension of organic disease. Hence, in neither case was auscultation employed as a means of discovering the physical signs which

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[1] Hasse, Dr. C. E. Pathological Anatomy (Sydenham Society's Translation), p. 169.

are said to belong to fatty degeneration. Admitting, however, the discovery of a feeble impulse, a feeble first sound, and extended præcordial dulness,—signs which the state of the heart after death might have led us to infer existed during life,—still these, when combined with any general signs recognised during a long course of years, could not have led to a distinct and satisfactory diagnosis; while, taken in connexion with the age of the individuals, their pallid complexion, and tendency to obesity, they give room for the conjecture, that the great organ of life in both, was yielding, through the progress of time, to those organic changes which mark the decay of its structure, and foretell the not distant cessation of its long-continued functions.

CANCEROUS TUMOUR OF THE NECK IN A CHILD.

A case of this unusual description is thus related by Dr. Gibb, Physician to the Montreal Dispensary.

Case. On the 14th of February, 1850, Madame F— called upon me for advice about her little boy, aged 5½ years, with a tumour in his neck. His history was as follows: When about three months old he had ascites, with œdema of the arms and chest, which after some time disappeared without treatment. His health continued good until he was two years of age, when he became delicate and sickly. When about three and a half years old, he fell upon the pavement and struck the front part of his chest, fracturing the middle of the sternum, which some time after united, but with angular deformity, the projecting angle being considerable. He was at this time treated by an eminent surgeon, who recommended suspension of the body by the arms, from the steps of a ladder, to correct the deformity, and at the same time put him upon tonic treatment. When about four years of age, a small tumour, less than the size of a marble, was noticed on the right side of the neck, near the angle of the jaw; it commenced slowly to increase, and after the lapse of six months attained the size of the yelk of an egg.

He was treated for it by as many as six or seven physicians, and had taken a large quantity of medicine from each: he took iodine internally as well as locally, which his mother thought reduced the tumour a little, or kept it stationary for a time. It had, however, continued to grow up to the present time, and has assumed a large size. On the 1st of January, 1850, he had an eruption about the face and head, which turned into sores; and on the 14th of February there were some red patches about the face, the remains of the sores.

Symptoms and Appearances. A tumour existed on the right side of the neck, proceeding from the parotidean region, downwards towards the clavicle, and extending in the direction of the shoulder. It approached also the mesian line of the neck, and would appear to encroach slightly upon the larynx, but not extending within the lower jaw. The tumour formed a considerable prominence, and a number of small veins were running in different directions over its surface. On the left side of the neck the external jugular was very prominent; not so on the right side. Three or four small red patches were present on the right cheek and chin; the countenance was pale and flabby; the eyes prominent and full of expression, which, with the shape of the head, denoted precocity of intellect; and the general appearance was what would be at once pronounced by an observer as scrofulous. On examining the tumour, however, we found that it was lobulated, and divided into two portions, a superior and an inferior; the former was partly anterior to the inferior at its lower part, and the latter extended outwards and downwards upon the neck towards the shoulder. The tumour was freely moveable in every direction; the integuments were not at all adherent to its capsule; and the consistency of the tumour was that of scirrhus, as it was impossible to make any impression upon it by firm pressure, from its firm and hard character; and

scarcely any pain was induced. The glands on the opposite side of the neck were not affected, nor were the glands in any other part of the body. The sternum was curved forward, and the chest anteriorly was prominent and rounded ; in other words, pigeon-breasted, said to be produced here by the occurrence of former fracture. The general health appeared to be good. There was no perceptible lesion of any internal organ.

The child had been seen and carefully examined by my friend Dr. Wright, and we coincided in the opinion as to the propriety of removing the tumour by the knife. The parents would not immediately consent to the operation, preferring to get further advice as to the expediency of this treatment.

I will here remark, that an operation was justifiable at this time, from the nature and character of the tumour—its peculiarly fibrous hardness, which was opposed to its being scrofulous ; its great mobility, and superficial situation over the deep cervical fascia ; its circumference being well defined, none of the deeper structures of the neck being either adherent to, or engaged in the diseased mass ; and the patient's health being good, without any internal complication, for after a careful examination of the thoracic and abdominal viscera, no lesion could be detected.

At a later period, however, one of the abdominal viscera became engaged, no doubt owing to the contamination of the circulating fluid by the malignant disease.[1]

On the 28th of February, I again saw the little fellow, and found the tumour very slightly increased in size. He was suffering from diarrhœa, for which I prescribed some powders. The parents had not made up their minds as to what they should do, as they said other gentlemen whom they had seen had declared an operation inadmissible.

On the 5th of March, the tumour appeared to be still further increasing, and spreading in a direction downwards and inwards.

On the 15th of May, for the first time, he began to complain of pain in the abdomen ; and on examination a hard body was felt, roughened or tuberculated on the surface, extending from the superior part of the left lumbar, towards the middle of the umbilical region, and which proved to be hypertrophy of the spleen. The liver was of normal dimensions, and the kidneys were healthy, as the urine presented nothing unusual. From this time to the 28th of June, the tumour kept slowly increasing in size, and extending in a direction further upwards and downwards, becoming more adherent near the angle of the jaw, and pushing the head towards the left side. He suffered at times from spasmodic cough, with occasional fits of dyspnœa, expectoration of frothy mucus, and a dislike to have anything around his neck. He, however, ate well, and slept comfortably.

During the months of July and August, nothing material was noticed in the progress of the case, excepting visible increase in the size of the tumour, and further enlargement of the spleen. He did not suffer from any pain ; but his cough was much more troublesome, requiring special treatment. On the 2nd of September, he complained of pain in his stomach and legs. He was unable to lie on his left side, from a sensation of choking being produced. He at this time also had frequent and severe fits of dyspnœa, almost amounting to suffocation ; he had alternate chills and flushings ; he was still able to sit at the door, although very weak, and was up till within two days of his death. Many of the symptoms mentioned continued to recur, with the addition of œdema of the hands and arms, and dysphagia. On the day previous to his death, he was seized with symptoms of choking, with congestion of the face and neck ; and the dyspnœa was so great, that the surgeon who was called in wanted to perform tracheotomy, which the parents would not consent to.

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[1] This fact is supported by the observation of Heller, in his *Pathological Chemistry of Cancer*, where he has shown the contamination of the blood in that disease, and has given a microscopic analysis of the blood in ten cases.

He continued to get worse, and died at half-past seven a.m., on the 19th of September, without a convulsive movement—carphology, however, existing a few hours before death.

The Necropsy was performed on the 20th, thirty-three hours after death, assisted by Drs. Peltier and Fenwick.

External Appearances. Colour of skin almost that of marble, perfectly blanched and smooth ; rigor mortis slight in degree ; tumour in neck very much sunken, and apparently diminished in bulk ; extremities emaciated.

Tumour. On making an incision several inches long through the skin, in the long axis of the tumour, it was found that it was not adherent to it, throughout any part of its circumference. It (the tumour) was moveable, but was firmly bound down to the deep cervical fascia. It was formed from an apparently enlarged gland, with others also enlarged attached to it, like bundles of grapes, and extending upwards under the lower jaw, forwards and inwards, towards the mesial line of the neck, one lobule pressing rather firmly against the middle of the trachea ; others extended backwards, and the bulk of them downwards towards the base of the neck and within the clavicle. On carefully dissecting away the greater part of this diseased mass, the attachments posteriorly and below were found very persistent, and required some effort to remove with care. The subclavian vein was pushed forwards, and the inferior part of the tumour lay immediately over the sac of the pleura. The sheath of the common carotid was pressed upon, and on dissecting the base of this tumour, the phrenic nerve seemed to emerge from almost the substance of a part of the tumour itself. The mass, as a whole, weighed about two pounds. On making a section through the centre of the tumour, it was with some difficulty that the scalpel could be made to cut, so hard and fibro-cartilaginous was its nature ; the glandular appearance did not exist, but it was replaced by what resembled true scirrhus, both in texture and consistence, and in general appearance. The smaller appendages to this mass were not quite so hard on section, but no tuberculous substance was seen ; nor, in fact, did a single gland that was examined present any scrofulous character.

The microscope here proved a great auxiliary in clearing up the true character of the tumour. Portions from the large scirrhus mass presented a well-marked fibrous structure, the fibres partaking of rectilinear arrangement ; between these appeared round cells and molecular granules ; some of the former were nucleated and some fusiform, not distinctly caudate, but possessing one or more nuclei, with an occasional nucleolus. The fibres were in parts interlaced with one another in one portion under examination, with small nucleated cells in the meshes. There was a little juicy exudation from the section of the tumour, but a very few cells were free on the field of the microscope. The smaller appendages of the large tumour presented nothing marked from the ordinary glandular structure.

Thorax. The angular curvature of the sternum outwards was particularly striking. The lungs, bronchi, and pleuræ were perfectly healthy ; three ounces of dark straw-coloured serum were present in the cavity of the right pleura, and about an ounce in that of the left. The pericardium contained two ounces of serum, and was, together with the heart, quite healthy. There were no abnormalities, either in form or texture, in any of the great vessels arising from the heart.

Abdomen. On pushing aside the small intestines, the spleen, enormously enlarged, was presented to view. It was irregularly nodulated, of a mottled crimson colour, with circular white patches scattered on its surface. It was exceedingly hard and resisting to the knife ; and a section showed the dark structure of the spleen itself, with white lines scattered throughout, and numerous circular sections of hard tubercles in various parts, varying in size and colour, the largest about half an inch in diameter. Some of these tubercles, under the microscope, showed granules free and in clusters ; fat

globules, large circular cells containing granules, very much resembling the compound granular corpuscle of Hughes Bennett, and most probably the result of inflammation ; and a number of melanotic granules, but no globules. The spleen weighed two pounds and a half. The liver was healthy, but of a sea-green colour, from decomposition ; there were about four white spots scattered over its surface, showing the existence of tubercles, the size of small peas, extending into the substance of the gland. The gall-bladder was nearly empty, and shrivelled up. The stomach, large and small intestines, mesentery, and mesenteric glands, were quite healthy ; so also were the kidneys, which were rather pale. The bladder was filled with urine. The head was not examined.

Remarks. Madame P—— has had five children, and all are dead excepting the last born, in May 1850. The first child, a boy, died of teething, at the age of nine and a half months ; the second, a girl, died at the age of eighteen months, with sores about her face, body, and abdomen ; the third, also a girl, died of cholera in 1849, at the age of six and a half months ; and the fourth, the subject of this paper, at the age of six years, with a cancerous disease. The mother states that all have had vomiting and purging of blood before death, more particularly severe in the third child ; and up to the period of illness in each, they were fat and healthy children.

On examining into the hereditary predisposition, I find that Madame P.'s maternal grandmother died of phthisis, at the age of 36. Her maternal uncle died of the same disease at the age of 29. Her mother is still alive and in good health, and all her relations, and those of her husband, are perfectly healthy. Madame P—— herself possesses a mixed temperament of the nervous and lymphatic, is very pale, but looks healthy. She says that she has been delicate since the age of six years, and suffers a good deal when pregnant from a feeling of choking. She tells me that she has had an inflammation eight times, for which she has been bled and otherwise treated, and she has had the cholera twice. Her husband is labouring under dyspepsia, which is undermining his health, and has suffered from hæmorrhoids for the last sixteen years. His father died at the age of 60. Cancer has never been known in the family.

I have entered minutely into these details, as the case had been seen during life by a number of professional men in this city, some of whom had pronounced it scrofula. The diagnosis, however obscure, was cleared up by the microscope, which showed the presence of the elements of cancer.

As to the difficulty experienced in diagnosing tumours, I might refer to many high authorities upon the subject ; but will content myself with relating the following case, which will show that oftentimes the most able surgeons will hesitate before pronouncing an opinion. When I was a pupil of the Hospital of La Charité, in Paris, and following M. Velpeau, a girl from the country, aged nineteen, was admitted on the 23rd of August 1848, with a large tumour, situated over the upper portion of the right scapula, and extending as far as the shoulder. Before this eminent surgeon reached the bed, a party of pupils and young surgeons (including myself), of different nations, were examining the case, and pronouncing an opinion as to what class the tumour belonged. Three or four young men (British surgeons) agreed with me as to the tumour being fibrous, and waited until M. Velpeau should reach the bed, to tell who were right. To our astonishment, he would not say what the nature of it was ; but made up his mind to remove it by operation, which he did some days after, when the tumour was found to be, and pronounced so by himself, of a genuine fibrous character.

Although cancer does not appear to have been existing in the family as an hereditary disease, we must consider the origin of it here as influenced, to a certain extent, by the health of the parents, which appears to have produced an effect on all the offspring.

That it is very rare in childhood, is supported by the testimony of writers on this disease ; but cases are reported where it has occurred in infancy, without any known hereditary taint. In Dr. Walshe's work on Cancer, is a table showing the absolute mortality from cancer, in both sexes, and at various ages. In a grand total of 3,036 cases, there were two cases under one year ; three at one year ; five at two years ; one at three years ; one at four years ; five between five and ten years ; and five between ten and fifteen years of age. Of 9,118 cases occurring between 1830 and 1840, in Paris and its environs, and published in a tabular form by M. Tanchou, and quoted by Dr. Walshe, there were twenty-three cases between the ages of one and ten years. M. Lebert, in the second volume of his *Physiologie Pathologique*, says : " Quant à l'âge dans lequel les affections cancéreuses se montrent le plus fréquemment nous n'en avons trouvé aucun exempt. On sait que l'encéphaloide de l'œil n'est pas une affection très-rare chez les enfants. Nous avons vu une fois une encéphaloide du poumon chez un enfant de sept mois, et un autre fois encéphaloide du rein chez un enfant de quatre ans."

Dr. Berg has, during his residence in Vienna, discovered carcinomatous induration of the entire pancreas in a new-born child. The post-mortem in the case reported, revealed the presence of a few tubercles in the liver and spleen, shewing the coexistence of cancer and tubercle together, but not in the same organs. Lebert adduces three cases in which both products coexisted ; and Dr. Martin, of Munich, has recorded a similar case in the *Lancet*. [*British American Medical and Physical Journal.*]

DR. LAYCOCK ON A NEW EPIDEMIC EXANTHEM.

Dr. Laycock has published, in the *Medical Times* for March 8, 1851, a clinical lecture on an affection which he considers as a *new epidemic exanthem*. About a year and a half since, he first observed the disease among the patients and domestics of a large private asylum ; and even the children of the matron suffered. The robust were affected as well as the feeble. Concurrently with the boils, there was sometimes an ecthymatous affection of the skin. The disease was not fatal in any case. Dr. Laycock believes it to be epidemic over a great part of England.

The disease is mainly characterized by a succession of boils on various parts of the body, of various sizes, from a bean to a walnut. First there is a small hard pimple, with, perhaps, a vesicle or circlet of vesicles on the top. This itches ; the top is scratched off ; when it is found that there is a small tumour in or below the derma, which becomes larger, inflamed, very painful, and at last suppurates, with an erysipelatous blush about it, and in bad cases with phlyctænæ. A number of these occur in succession on various parts of the body, but principally on the fore-arm, leg, and nates. Occasionally there is a vesicle only, which quickly puts on the appearance of ecthyma ; and in one case at the York Dispensary (in a child), there was just one large livid-looking phlyctæna, as large as a crownpiece, very like gangrene. Sometimes there is a solitary boil, large, angry-looking, and mischievous as a carbuncle. An aged lady, who came under his notice, had one of these on the mons veneris ; and sometimes even the minor specimens are not to be distinguished from carbuncles. Very often, after they have sloughed and healed, they leave an indurated condition of the skin and subcutaneous cellular tissue.

The eruption, whatever form it may assume, has a definite period of duration, and continues from two to six weeks. The furuncular form is not always more chronic than the ecthymatous, but is so for the most part ; the exceptions being those cases in which the patient is cachectic. It is not, however, dependent at all upon a cachectic condition, for it occurs in robust

men and in very healthy children. Nevertheless, the cachectic suffer more from the disease, and perhaps they suffer also in greater numbers. In some instances we may clearly trace the localization of the boils to some local cause; for example, a crop will break out round a blister, or round another boil, if it be poulticed much, or round a burn. In one case, they occurred on the neck, thorax, and upper arm of a young woman who had irritated her throat by the inunction of the iodide of potassium ointment; and in another, chronic psoriasis seemed to have been the exciting cause. Dr. Laycock suspects that any local irritation of the skin is sufficient to induce the disease in an individual within the sphere of the epidemic.

Dr. Laycock believes that this eruptive disease occurs under the following forms. 1. There may be a solitary boil, presenting, for instance, a phlyctenoid character, with inflammation of an erysipelatous character, extending down the arm to the wrist, and upwards towards the shoulder. 2. A solitary phlyctæna, or several. 3. Several boils, varying in size and character up to carbuncles, without any other cutaneous disease. 4. Boils, with ecthyma, eczema, or impetigo; but much more frequently with ecthyma. 5. The boils differ, in leaving or not leaving behind them an induration of the skin and subcutaneous tissue.

Dr. Laycock is of opinion that this epidemic is essentially a blood-disoase, caused by some specific poison. What that poison may be, and what its origin, are altogether uncertain; it may be from the atmosphere, or from our food, as American flour for example, or from the flesh of tainted cattle, or may be generated within the body by atmospheric peculiarities; or it may be a contagious *materies*, originating in the first instance with brutes, and then transmitted from one individual to another. If it be the latter, as seems most probable, then he thinks it is *strictly* contagious, like glanders or syphilis, and not infectious also.

During several months past, there has been an epizootic prevalent in Yorkshire, affecting horses and cattle. In the latter, the mouth and throat are so inflamed that the animal cannot eat, or the hoofs come off. The same disease is prevalent in Shropshire. It seems to correspond with the epizootic *Maulweh* and *Klauenseuche* of the Germans, and is accompanied with an aphthous eruption. According to Levitzky, persons attending on cattle attacked with this disease, or something similar, which he terms, "angina catarrhalis", were affected with an inflammatory *rheumatic* fever (not with an angina catarrhalis), accompanied with a pustular eruption, and abscesses and ulceration of the lower extremities.

In treating this furuncular disease, little more is required, in ordinary cases, than to let it run its course, which is completed in three or four weeks. An occasional purgative and warm bath will be useful in allaying inflammatory action, and perhaps diminishing the number of boils. Two grains of calomel with rhubarb, colocynth, or scammony, twice a week, will be useful: in the more severe cases, the mineral acids and vegetable bitters must be added, and a good diet; the liquor of the amorphous sulphate of quinine in full doses, with dilute nitric acid, has been found useful. In all cases, however, purgatives and the warm bath are beneficial. Cataplasms, fomentations, etc., are not of much service. So soon as suppuration is established, a free incision should be made into the boil, and then the water-dressing applied: care should be taken that the pus do not flow on the adjoining skin, and (as in erysipelas) that the sponges, etc., be not used by other patients or persons.

[Dr. Laycock correctly describes what has attracted our attention for several recent successive seasons—an unusual prevalence of boils. The disease has this year been very prevalent in London and the neighbourhood. EDITORS OF LONDON J. OF MED.]

DIFFERENTIAL DIAGNOSIS OF THE DIFFERENT KINDS OF GENERAL PARALYSIS, BY THE AID OF GALVANISM LOCALLY APPLIED.

In the *Annales Médico-Psychologiques* for October 1850, p. 603, there is an interesting paper on this subject by M. Brierre de Boismont.

The author thinks that there exist two species of general paralysis, which differ completely in their nature and their seat. The first species of these progressive paralytic cases, without alienation of mind, exhibits, as its essential character, a weakening, a diminution, and an abolition of irritability, more marked in proportion to the greater duration of the disease. This alteration may begin in a muscle, or in a limb, generally in the inferior extremities; then it attacks, successively, all parts, and reaches the tongue. In many cases, the autopsy, made with the greatest care, has revealed no lesion in the brain or the spinal cord, in spite of the long duration of the disease. M. de Boismont cites the case of a lady in whom first the left upper extremity, then the lower, and, successively, those of the other side, lost their power. The fingers were contracted, and it became difficult for her to hold objects; walking was effected only incompletely. The paralysis reached the tongue, and the patient pronounced, with slowness and hesitation, the words suggested by her mind. Sensibility was preserved, the intelligence was unimpaired; the disease lasted more than a year. The digestive functions were well performed; the urine and the fæces were under the patient's control. The electrical apparatus produced no contraction in the lower limbs. The tibialis anticus, the peronæi and the flexors, remained immoveable under the influence of the current. This phenomenon was remarked in a less marked degree in the muscles of the superior limbs; the muscles of the trunk were feebly contracted. To this case another is added, of a patient who died under the care of M. Andral, with all the symptoms of general paralysis, without mental aberration, which had lasted for more than a year. In this case, irritability was completely annihilated, although he could still execute some movements. Consciousness remained unimpaired to the end. The autopsy, made with care under the superintendence of M. Andral, revealed no alteration; and a microscopical examination, made by M. Lebert, exhibited only a fatty deposition in some of the muscles of the thigh. The muscular fibre of the muscles of the leg, in which irritability was extinguished, shewed no alteration. It was interesting to contrast these results with those furnished by the examination of the general progressive paralysis of the insane. M. Boismont and M. Duchenne accordingly instituted experiments upon three paralytic insane patients, who were paralytic in different degrees. The first had only an intermittent stammering; the second was at the second period, but considerably emaciated; the third, who had been paralytic for several years, stood with difficulty, and was no longer able to answer questions. In all three, irritability existed in a marked degree. These experiments were repeated at the Bicêtre, and the patients were selected indiscriminately, among the most advanced cases, the most aged, and those who had kept their beds for several months. Irritability was ascertained to exist in the six cases examined, two of whom had arrived at a great degree of emaciation, and even of atrophy, especially in the inferior extremities. Almost all these patients passed their fæces and urine under them. It may therefore be advanced, as a constant circumstance, that in cases of general paralysis with mental alienation, there is preservation of irritability. M. de Boismont remarks that, with regard to the seat of general paralysis, it is impossible to admit that it can always be localised in the nervous centres. There are cases of this disease which depend upon the spinal cord; others, upon the great sympathetic. There are some which are *peripherical*, and several which are not connected with any appreciable lesion of the nervous centres; and there are a certain number of cases which depend upon disease of the brain.

HYDATIDS IN A LUNG.

Dr. Hérard relates the folllowing case in the *Union Médicale* for January 25, 1851. He believes that it may be interesting, from its rarity.

Case. Catherine R., aged 61, was admitted into the Hôpital de la Charité, on November 25, 1850. Although of a weak constitution, she had enjoyed pretty good health till within the last few years. She had lived in a cold, damp place, but had never had rheumatism, nor any acute chest affection. For some time, she had been troubled with loss of breath and palpitation on exertion. Three years ago a cough commenced, which continued almost incessantly, and was accompanied by the difficult expectoration of scanty sero-mucous sputa. For the last fortnight, she had been every night attacked by dyspnœa, which had compelled her to remain sitting up.

On admission, she presented the appearance of a person in whom the blood-making process was imperfectly performed. The face was of a pale bluish colour; the lips were livid; the fingers presented the same appearance, especially at the level of the nails; the lower limbs were slightly œdematous. The chest was prominent; the respiration short and frequent; there was cough, and scanty expectoration of tolerably viscid sputa. On percussion, there was increased resonance on both sides in front; behind, and laterally, on the left side, the sound was very clear in the lower fourth, but there was perfect dulness in the three upper fourths of the lung; on the right side, there was increased resonance throughout. On auscultation, the breath-sound in front, on both sides, was rough under the clavicles, but feeble in other parts, and mixed with sonorous rhonchus; on the right side, posteriorly, there were sibilant and sub-crepitant rhonchi, with feeble vesicular expansion; on the left side, behind, there were some sub-crepitating rhonchi at the base, and the respiratory murmur was absent in the upper three-fourths of this side, but there were here no rhonchi nor *souffle*. The præcordial dulness did not seem increased in extent. The heart's impulse was strong and extensive; the apex beat in the epigastrium. The sounds were obscured by the sibilant rhonchus; but the double sound seemed free from any valvular murmur. The veins of the neck were dilated, especially on the left side; the pulse was 90, small, equal, and regular. There was cephalalgia, lividity, and general weakness; the tongue was white, the appetite good; there was no nausea or vomiting, and the bowels were regularly open. The patient died on the day after admission, without presenting any other symptoms beyond an increase of the debility and lividity.

Post-Mortem Examination, thirty-six hours after death. On opening the chest, there was no appearance of disease in the left lung. The heart was enlarged, and the free edges of the mitral valve were remarkably thickened. Both lungs were emphysematous in a high degree; both, especially the right, were in a state of general sanguineous infiltration; and, when cut into, gave exit to a large quantity of dark blood. The whole incised surface was of a red colour, and presented, in some parts, the appearance of pulmonary apoplexy. The left lung was adherent, at the side, to the wall of the chest; and, on attempting to destroy the adhesions, there was discovered a white, soft tumour, protruding through an opening torn in the lung towards its base. On enlarging this aperture, the interior of the lung was found to be hollowed out into a large cavity, filled by a vesicle of about the size of an ostrich's egg.

The *vesicle* or *hydatid* was solitary; it was white, soft, and friable, like hardened white of egg. It was not adherent to the cyst, which separated it from the lung. Its thickness was between five and six *millimètres*. The exterior was slightly granular; the internal surface was smoother, and several superimposed fine layers could be raised. The vesicle was distended by a transparent, colourless liquid, in which the naked eye could detect small grains, which, under the microscope, were recognized as echinococci. The

internal wall of the vesicle was free from the granulations which are frequently met with, but which, in this case, were free in the liquid enclosed in the hydatid.

The cyst was thin, forming a sort of serous membrane, behind which was observed the dark pulmonary tissue, destroyed by the pressure of the vesicle. In front, and especially towards the root of the lung, as well as at the base, there was a tolerable amount of pulmonary tissue ; but posteriorly, (in the three upper fourths), and laterally, the lung was reduced to a layer of a few *millimètres* in thickness ; and, in some parts, its tissue had entirely disappeared, so that the cyst rested immediately on the pleura. Under the cyst, the vessels and bronchial tubes were seen in the form of whitish lines.

The other organs presented no remarkable appearance. Most of them were congested ; they contained no hydatids.

HYDATID CYST IN THE LIVER, OPENED BY CAUSTIC POTASH, AND INCISION : RECOVERY.

We quote the following from *L'Union Médicale* for 24th April 1851.

Case. In June 1849, M. Morisseau was consulted by a butcher in the neighbourhood of La Flèche, who had complained, for eighteen months, of oppression and dull pain in the abdomen. There was a swelling in the right hypochondrium, very distinct to the touch, almost insensible to pressure, and presenting distinct fluctuation. The patient had not been previously aware of this enlargement. His appetite was good, he slept well, and walked easily. There was not the slightest appearance of jaundice. Nothing remarkable was observed in the heart, lungs, or urinary organs ; there was no œdema.

Being convinced that there was a collection of liquid in the liver, M. Morisseau applied caustic potash to the tumour, and incised the eschar. Instead of a flow of liquid, there appeared at the opening a membrane presenting the characters and thickness of the pellicle of an egg deprived of its shell. Believing that it was a portion of intestine, he tried to push it back ; but, in spite of his efforts, a soft, elastic body, of the size and shape of a hen's egg, soon escaped. This was shortly after followed by about fifteen other hydatids, of all sizes, from that of a pea to that of a nut. They were all transparent. The patient was kept in the horizontal position ; and, during three days, above sixty individual hydatids escaped ; they were apparently all sound.

After the last acephalocyst had been evacuated, the dressings were found every day saturated with bile, recognizable by its colour and smell. Its quantity was estimated at about half-a-pint in twenty-four hours. This continued to escape during nearly six weeks, without apparent inconvenience to any function. The patient became thin ; but he continued to walk about, and to eat and drink. In two months, the wound was perfectly cicatrized, and health was restored, the individual at the same time gaining flesh.

In connexion with this case, the editor of *L'Union Médicale* makes the following—

Remarks. About two years ago, M. Boys de Loury communicated to the Society of Medicine, in Paris, a case almost similar to the one just related. The subject was also a butcher ; and Dupuytren has observed, that hydatids of the liver are principally found in persons of that occupation. But of fifty-eight cases which we have examined, not one individual was in any way connected with the preparation of articles of food.

M. Morisseau enquires where the hydatids were enclosed ; and why so much bile escaped ? They could not have been, as he supposes, in the gall-bladder ; for then bile should have been evacuated from the first. It is more probable that the cyst was very close to it, and that a fistulous communication was established between them, which gradually closed. The prompti-

tude with which M. Morisseau acted, probably saved the life of the patient. By delay, the cyst would have opened into some internal organ, and have compromised life. The mixture of the bile with the liquid in the cyst, might have produced very severe, if not mortal, inflammatory symptoms.

BISMUTH AND BELLADONNA IN GASTRALGIA.

The late Professor Caizergues, of Montpellier, was accustomed to combine belladonna and bismuth in the treatment of nervous affections of the stomach: and M. Artaud, observing the number of rapidly cured cases in the hospital of Saint Eloy, regards this combination as possessing a truly specific action. The formula which M. Caizergues commonly employed was the following: sub-nitrate of bismuth, 10 grammes (154½ grains); extract of belladonna, 1 gramme (15½ grains). To be divided into forty pills, of which two are to be taken morning and evening. M. Artaud believes that these pills are efficacious, not only in purely nervous affections of the stomach, but also in those which depend on some constitutional cause, as chlorosis. *Revue Thérapeutique du Midi*, as quoted in *Journal des Connaissances Médico-Chirurgicales*, January 2, 1851.

DISEASES OF THE LUNGS PRODUCED BY CONGENITAL SYPHILIS.

M. Depaul lately communicated to the Academy of Medicine in Paris a memoir on a manifestation of congenital or intra-uterine syphilis, consisting in a hitherto unobserved alteration of the lungs. The affection to which he refers was first described by him in 1837; since which time he has had opportunities of observing about twenty cases. The lungs were sometimes indurated from infiltration with pus; and sometimes there were true purulent collections, with walls of greater or less thickness, enclosing in their meshes a liquid of the same nature. These pulmonary lesions seldom existed alone: there were most usually, in the skin or elsewhere, indubitable proofs of syphilis. (Abridged from *Gazette Médicale de Paris*, 3 May 1851.)

STRYCHNIA IN PARALYSIS.

M. Moreau, of Tours, has recently given Strychnia in his practice at the Bicêtre to three patients. The period which had elapsed since they had been attacked was respectively eight, four, and two years. In all the cases, the dose was gradually increased till shocks, more or less decided, were experienced; this required from two to eighteen *millegrammes*, from about 1-22 to 1-11 of a grain, in eight or nine days. As soon as M. Moreau obtained the shocks, he gradually returned to minute doses. In none of the three cases was a radical cure obtained; but in all there was a very perceptible amelioration. It is important to mention, that the remedy seems most applicable to cases of long-standing: for the degree of improvement in M. Moreau's cases corresponded with the time which had elapsed since the seizure. [*Annales Médico-Psychologiques*, Oct. 1850.]

In *hysterical paralysis*, Dr. Vigla reports that he has obtained excellent results from strychnia. [*Gazette des Hôp.*, 14 Sep. 1850.]

In *paralysis of the bladder* Dr. Lecluyse effected a cure by a *strychnia injection*, after the medicine had failed to do any good when administered internally. The following is the formula:—strychnia, 300 centigrammes; alcohol, enough to dissolve the strychnia; water, 50 grammes. On each occasion 30 grammes were injected, and, after four injections, the paralysis entirely ceased. [London Journal of Medicine for Sept. 1850, p. 882. *Annales de la Soc. Méd. d'Emulation.*]

We advise all who use strychnia to proceed with extreme caution, to watch carefully the effects of the early doses, and never to give it in the form of pills.

SURGERY.

CASE OF INTERNAL STRANGULATION BY A DIVERTICULUM OF THE ILEUM.

M. Bouvier related to the Academy of Medicine in Paris, on April 8th, 1851, a case of Strangulation by a Diverticulum of the Ileum, and exhibited the pathological specimen.

Case. A woman, aged 24, had been delivered for some days, when she felt dull pains in the abdomen. M. Bouvier ascertained the presence of a hard moveable tumour, of the size of a fist, in the right iliac fossa. It appeared to have no connexion with the uterus; and this was confirmed by an examination made by M. Huguier. The patient, otherwise feeble, had not had a stool for several days, and was somewhat relieved by some slight purgatives, when, on the second of April, after eating a large quantity of potatoes, she was seized with colic and vomiting. The next day, the symptoms increased in the evening, and the patient died on the 4th April, after having had a profuse alvine evacuation, with all the symptoms of acute peritonitis.

On *post-mortem* examination, besides other lesions of more or less standing, there was found to be a strangulation of five or six loops of the ileum, by an appendix of the same intestine. This diverticulum, after describing a spiral twist completely round the intestine, was implanted by a many-pedicled extremity, in the iliac fossa, where there existed numerous adhesions between the intestines, the epiploon, the appendages of the uterus, and the abdominal walls. It appeared that, previously to the attack of acute peritonitis, there must have been chronic inflammation in the cellular tissue around the uterus, and in the right broad ligament; and that, in consequence, adhesions were produced between the uterine appendages and a loop of intestine, with the abdominal wall; the many-digitated extremity of the diverticulum had also, for some time, contracted adhesions with the walls and the large epiploon, forming a ring in which a considerable portion of the ileum had become strangulated. [*Gazette Médicale de Paris*, 12 April 1851.]

MECHANISM OF STRANGULATION BY INTESTINAL DIVERTICULA.

Dr. J. Parise communicated to the *Académie de Médecine*, on Jan. 28, a memoir on the mechanism of strangulation by knots, more or less complete, formed by diverticula of intestine.

The effects produced by diverticula vary according as they belong to one or other of the following categories. In one case, the diverticulum seizes a loop of intestine, and forms a simple knot in the form of a rosette; in the other, two loops are formed. The author detailed five cases, of which four belonged to the first category, and one, which was unique, to the second: he then considered the mechanism by which strangulation is effected in these cases.

Two anatomical conditions are necessary for the production of strangulation by diverticula. 1. A certain length of the diverticulum, at least eight or nine *centimètres:* 2. Sufficient calibre at its free extremity. The diverticulum must be long enough to embrace the loop of intestine; and its extremity must be capable of dilatation, so as to fasten the knot. The first condition is necessary for the formation of the knot; the second for its tightness. The physiological conditions are doubtless to be sought for in the irregular movements of the intestine, and of its appendix, in combination with external impulses.

In forming the knot with a simple loop, the diverticulum seizes the loop of intestine which is immediately above or below it, turns round it, passes

beyond its origin, and ends in a dilated extremity. In the other form, the diverticulum embraces two loops of intestine, one above, the other below its origin.

The following are the conclusions at which Dr. Parise has arrived :

1. Diverticula of the ileum may become knotted round the intestine so as to produce strangulation.

2. The strangulation presents itself in two forms, the loop being sometimes single, and sometimes double.

3. In the first form, the diverticulum surrounds the pedicle of a loop of intestine, and forms with it a simple *nœud à rosette.*

4. In the second form, two loops are strangulated, one above, the other below the origin of the diverticulum.

5. In both cases, the firmness of the knot is due to the dilated extremity of the diverticulum ; and this dilatation is the key to the strangulation.

6. The symptoms which result are those of internal strangulation. Their attack is sudden, their progress rapid, and their termination constantly fatal.

7. The symptoms which should cause us to suspect the presence of internal strangulation are : sudden invasion of pain in the right side of the abdomen, between the umbilicus and the cœcum ; tympanitic distension limited to that region ; absence of all circumstances which would lead one to suspect the existence of foreign bodies, of pseudo-membranous bands, of organic contractions, of invagination, etc.

8. Strangulation by diverticular knots, like every other internal strangulation which follows a rapid course, is beyond the reach of art.

9. If the progress be less rapid, if it be probable that the strangulation is at the lower part of the ileum, and if there be not general peritonitis, an operation should be performed.

M. Parise promises to explain, in a future communication, the operation which he proposes for the relief of these cases. [*Gazette Médicale de Paris*, February 1, 1851.]

ON A FORM OF SANGUINEOUS PELVIC TUMOUR IN FEMALES.

M. Nélaton calls attention to a peculiar form of tumour, hitherto much neglected by authors. These tumours are usually preceded by some general symptoms, as *malaise*, disturbed menstruation, pains in the hypogastrium, and a feeling as if a heavy body were about to escape from the vagina. The abdomen is sometimes enlarged, and a hard, very painful tumour is felt by the patients in the hypogastric region ; in other cases, they are not aware of its existence, and, when it is pointed out to them, they cannot say how long they have had it. On examination, the abdomen is found to be inflated, tense, convex, and painful. The decubitus is dorsal, with the thighs flexed on the pelvis. By palpation in the hypogastrium, a tumour is felt in the cavity of the pelvis *(petit bassin)*. This is sometimes confined within its inner border, and sometimes extends as high as the umbilicus : it is commonly inclined towards the right iliac fossa. The tumour is small, rounded, without knotty projections, and becomes gradually lost in the pelvic cavity ; it is scarcely moveable, and is of pretty firm consistence, sometimes presenting fluctuation. On vaginal examination, there is found, between the uterus and rectum, a tumour, advancing towards the orifice of the vulva in proportion to its size. It is smooth, rounded, and fluctuating, varying from the size of a large goose-egg to that of a thumb, without pulsation or expansive movement : it may narrow the vaginal canal so as only to permit of the passage of the index finger. The uterus may be raised by the tumour, so that its body is felt above the pubes ; and its neck may be so much elevated, that the fore finger can only with great difficulty reach it.

The treatment of these tumours consists in evacuating the liquid which

they contain. M. Nélaton proposes to employ a large trocar, and then a simple lithotome to enlarge the opening. The patient is placed on her back, on a tolerably high bed, with her legs and thighs bent, as in the position for lithotomy. By introducing a speculum into the vagina, the tumour is discovered towards its base, at the posterior wall. The point where fluctuation is most apparent having been discovered, a long trocar is introduced, with a canula sufficiently long to allow the escape of the matter, which is liquid, black, and viscid, like treacle. The incision ought generally to be three *centimètres* in extent; it should be made in the axis of the vagina, so as to avoid wounding the uterine arteries. It should also be carefully ascertained that there are no arteries on that part of the wall in which the incision is made. The incision should neither be too wide nor too deep, so that the rectum may be avoided. When, some days after the operation, the liquid which escapes has become purulent and fetid, disinfectant injections should be employed. The strength of the patient should at the same time be supported by quinine and other tonics. The walls of the tumour should also be explored with a scoop *(curette)*, so as to remove any adherent clots, which may be in a state of commencing putrefaction. [*Gazette des Hôpitaux*, Feb. 8, 1851, as quoted in *L'Union Médicale*, Feb. 11, 1851.]

OBSTETRICS.

CAUSES AND TREATMENT OF SECONDARY HEMORRHAGE AFTER PARTURITION.

A valuable paper on this subject is published, in the *Dublin Quarterly Journal of Medical Science* for May 1851, by Dr. M'Clintock. It specially relates to those cases in which any profuse sanguineous discharge from the vagina takes place, commencing six hours after a patient has been delivered, and within a month from this epoch.

Causes. I. *The presence of a portion of placenta in the uterus*, is one of the most frequent causes. This is observed to be most generally the result of artificial removal of the after-birth, especially if the operator be incautious or timid, but it may happen in the most skilful hands, when the cause of detention has been morbid adhesion of a very intimate nature. This seldom produces any untoward symptoms until the third or fourth day; but then, if it be not cast off, many may be developed. The author specially speaks of the probability of uterine or crural phlebitis, and of secondary hæmorrhage, supervening. This latter seldom comes on until the fourth or fifth day, and it may not do so until the second week, or later; in fact, so long as a fragment of placenta remains in the uterine cavity the patient can have no security against a recurrence of the sanguineous discharge, and the period at which it may come away is extremely variable; sometimes not until the third week, or later.

II. *The retention of a coagulum, of any size, in the uterus beyond the first few hours after delivery.* In this case, the immediate or exciting cause of the effusion is probably some accidental displacement of the clot, or excitement of the arterial system. The symptoms very much resemble those produced by the retention of part of the placenta: but there is less of the fœtid smell, and no shreds or portions of the placenta are expelled, whilst the coagulum, if entire, has exactly the shape of the uterine cavity.

III. *Relaxation of the uterine fibres.* This is admitted to be a point, in regard to which it is difficult to obtain direct evidence; but several cases are referred to which favour such a view; and it is observed that, from the numerous and strongly marked sympathies of the uterus, it is reasonable to conclude, that for some days, at all events, after parturition, there may be an interruption of its contractile function, through the influence of deep mental impressions, or certain bodily derangements.

IV. *Local or general disturbance of the vascular system*, whether induced by premature exertion, the incautious use of stimulants, agitation of mind, local determination of blood, or whatever tends to increase the force of the vital current. A knowledge of this cause points out an additional reason for enjoining strict rest, and the horizontal position, when the womb remains unusually large at a late period after delivery.

V. *Great fœcal accumulation*, in the lower part of the great intestine, is mentioned on the authority of Moreau ; who mentions cases in which the hæmorrhage ceased upon his mechanically removing the excrementitious matter.

VI. *Functional Disorder of the Liver.* Dr. Ayre has known this form of uterine hæmorrhage to have been produced by functional disorder of the liver, and to have been suppressed by the administration of calomel. At first he ascribed the effect of the medicine, in relieving the hæmorrhage, to the evacuation of morbid matters from the bowels ; but further, and more accurate observations of the colour and condition of the stools, of the course of the disorder and effects of the remedy, convinced him that such was not the case ; and that the effect arises from an alteration of the morbid actions of the liver, and other organs of digestion. The cause is said to be in this case a sudden interruption of the secreting function of the liver, which gives rise to an abdominal venous congestion, in which the uterus may participate ; and the indication of cure for the hæmorrhage is to restore the biliary secretion. Calomel, he observes, is the medicine which must be mainly relied on ; and it must be given in small, but frequently renewed doses, following them up by aperients, or combining them with minute doses of opium, when a diarrhœa is present, and continuing them until some impression is made upon the complaint, even at the risk of slightly affecting the mouth.

VII. *Inflammatory Ulceration of the Cervix Uteri.* According to Dr. Henry Bennett. The author thinks that the frequency of this, as a cause, has been somewhat exaggerated ; for, first, Dr. Bennett observes, that inflammatory ulceration of the cervix is of frequent occurrence during pregnancy, which cannot be said of lochial menorrhagia ; and, in the second place, the author remarks, that he has strong reason to believe that many patients, affected with chronic inflammation and ulceration of the os uteri, had been delivered under his care, who nevertheless had no subsequent attack of hæmorrhage, or extraordinary amount of lochial discharge. It is suggested, however, that it occasionally happens, especially in first labours, that the os uteri is slightly fissured by the passage of the child, and that this might put on an ulcerous character, and thus give rise to hæmorrhage during the puerperal state.

VIII. *Presence of a polypus attached to the uterus*, which may for the first time give evidence of its existence soon after delivery. Various authorities and cases are referred to on this point.

IX. *Inversion of the uterus*, it is said, has been long recognised as a cause of hæmorrhage post partum. "I feel strong reasons", says Mr. Crosse, "for believing, as has been repeatedly stated by authors of high reputation and great experience, that partial inversion exists more often than is generally suspected, and is the cause of hæmorrhage after the delivery of the after-birth. The loss so produced ordinarily takes place immediately upon its removal ; but it may be repeated, at uncertain intervals, subsequently, if the malposition be not rectified." The hæmorrhage may continue for hours, or first show itself after several hours, or even after a day or two.

Besides the causes which are considered to be the ordinary causes of hæmorrhage after parturition, the author refers to several cases in which it had occurred from causes of an unusual character ; and in most of which its precise origin was only discovered on a post-mortem examination. These are highly interesting, and cannot be read without considerable advantage.

Treatment. The general principles of treatment, in all these cases, are to tranquillize the circulation, both local and general; to promote the condensation of the uterine structure, and to use such constitutional and local remedies as may tend to favour coagulation at the mouths of the vessels.

The first and second indications are to be fulfilled, by enjoining perfect rest in the horizontal position, and withholding stimuli of every kind. The patient must lie on a hard bed, in which her hips cannot sink, and firm pressure, with occasional friction, should be made over the uterus, so as to promote its contraction, and expel any coagulum that might have formed within it. At the same time, the ergot of rye should be administered with as little delay as possible, since, in these cases, our chief reliance for the suppression of the discharge is on this remedy. Fifteen or twenty grains of the fresh powder may be given in the first instance, and repeated, if necessary, in forty minutes or an hour. When the discharge is not very profuse, five or six grain doses may be given every three or four hours; but in every case, the first dose should be a full one. If the patient be alarmingly reduced by hæmorrhage, caution is necessary respecting it; as, it is observed, that the ergot exercises a decidedly sedative influence upon the system. Cold applications should not be applied on slight grounds for the first day or two after labour, for fear of inducing uterine inflammation; but otherwise there is no objection to them. A cold enema, with a spoonful of common marine salt, is recommended; as is also a moderate dose of the sedative solution of opium.

Should these means fail, recourse must be had to the tampon or plug. We must not forget the possibility of internal hæmorrhage occurring during its use; which is to be guarded against by securing a pad over the uterus with a well applied binder, and occasionally examining the hypogastrium. The author adds, that a silk pocket handkerchief forms about the best material for a plug that can be used.

When the hæmorrhage manifests a disposition to recur, recourse must be had to constitutional means for its suppression; and the state of the liver and bowels must be looked to. Acetate of lead receives a very qualified recommendation. Sulphate of zinc, in doses of one or two grains, with a quarter or half a grain of opium, may be tried, as also the dilute sulphuric, and gallic acid; the latter, in one case, acted very promptly and effectually in suppressing the bleeding. The tincture of Indian hemp, and oxide of silver, are also spoken of in favourable terms.

If the hæmorrhage is of an atonic or passive character, tonic and chalybeate medicines are recommended; and a very admirable combination of them, it is said, is the sulphate of iron, sulphate of quina, dilute sulphuric acid and water; to which, if required, a little Epsom salts may be added. A strong infusion of bark and elixir of vitriol, with a small quantity of tincture of cinnamon, was recommended by Dr. Leake. In extreme cases of uterine hæmorrhage, full doses of oil of turpentine, sometimes as much as an ounce, with half that quantity of almond oil for a dose, was found of much benefit by Mr. Griffith of Wrexham.

When there is ground for suspecting that the hæmorrhage results from the retention of a portion of placenta, or clot, a vaginal examination should at once be made, as speedy removal of the foreign body is desirable; but great caution is necessary in removing a portion of placenta when it is adherent, or when this proceeding would be attended with much difficulty.

When ulcerative disease of the cervix is the probable cause of hæmorrhage, the treatment does not essentially differ from that of ordinary cases of inflammatory ulceration of the cervix uteri. Common prudence will suggest the advisability of postponing topical applications to the os uteri, until the system has recovered from the effects of parturition. If a fortnight, or three weeks, can be allowed to pass over, so much the better; then we may begin

to touch the surface of the ulcer with the nitrate of silver, or some other caustic. A mild injection may be thrown into the vagina. Early and active counter-irritation should also be made over the sacrum. Constitutional treatment must in every case be employed, and the system restored as speedily as possible to its most normal state.

In hæmorrhage depending upon a polypus, much circumspection is necessary in deciding upon its removal, as many unpleasant consequences have attended the operation under these circumstances, on account of the increased size and vascularity of the uterus, and the tendency still existing to inflammation and phlebitis. Hence, it is recommended to forego all attempts to extirpate the tumour as long as possible, or until the woman has recovered from the effects of parturition. These cases, however, require very different treatment according to their different circumstances. Many cases are referred to in illustration.

MANAGEMENT OF YOUNG WOMEN BEFORE THE FIRST PERIOD OF MENSTRUATION.

Dr. E. J. Tilt, in the *Provincial Medical and Surgical Journal*, March 19th, 1851, has the following sensible remarks on this subject.

"During the stage of puberal development, nature is for some time attempting to inaugurate a most important function, and those efforts which should be assisted, are often frustrated by girls themselves, who—taken by surprise—are either in total ignorance, or are insufficiently prepared to adopt such means as will favour its establishment, and ensure its due reappearance. If mothers, independently of professional assistance, are, from ignorance, unprepared to give their daughters advice at this period, or withhold it from mistaken notions of delicacy, the most serious consequences may ensue, as is obvious from the result of a statistical inquiry in which I have been long engaged. In several hundred women, I find that twenty-five per cent. were unprepared for its appearance; thirteen girls out of the twenty-five were much frightened, screamed, or went into hysterical fits; and six out of the thirteen thought themselves wounded, and washed with cold water. Of those frightened, the flow was checked in seven instances, was never restored in three, and the general health of all was seriously impaired. Of those who washed with cold water, two succeeded in effectually suppressing the flow, which only reappeared after several years, and then at irregular intervals, and was never healthily established.

"It may be said, that it is only in the lower classes that girls are kept in darkness relative to what is of so much importance; but this is perfectly groundless. The same bad management equally prevails in the middle and the higher classes of society. Girls in affluent circumstances and well educated, are, I know, often taken by surprise at the appearance of this function. Mothers who, in other respects, act judiciously, will not condescend so far to bow down to the infirmities of their nature, as to give the necessary advice to their daughters; but when the event happens, they are too often turned over to the management of an unmarried attendant. I have been also informed by a lady presiding over a large establishment of young ladies, that the pupils who are placed with her after the appearance of that function, are never properly prepared for the event, and that many are so ignorant of themselves, that it is extremely difficult to prevent their washing with cold water, in the endeavour to remove what they naturally view with feelings of disgust.

"When girls—young though they may be—suffer habitually from headache, and when this is accompanied by dulness of intellect, dizziness, heaviness, and great tendency to sleep, it is most probable that menstruation is impending, particularly if these head symptoms coincide or alternate with pains in the back and lower limbs. Additional confirmation may also be

found in the change which may be observed in a girl's character. If she no longer take pleasure in the society of children, shun companions of her own age, and find in solitude charms hitherto unknown;—if uneven in temper, she is at times as usual—cheerful and expansive, at others cold, peevish, fretful, and even mischievous, but afterwards atoning for these inconsistencies by the most fervent expressions of tenderness;—if her eyes shine with unwonted lustre in mixed society, having lost the innocent confiding expression of children, who boldly dive into the depths of other eyes, because they know not of dangers to be encountered there;—in fact, when woman has become unto herself a mystery, the medical attendant should lose no time in advising the mother not to let her daughter be taken unawares, and to prepare her to expect what is the common lot of all her sex, so that its first appearance may neither be arrested by the alarm naturally felt at something hitherto inexperienced, nor by the dangerous application to which, in their ignorance, they may imprudently have recourse."

Dr. Tilt strongly deprecates the use of emmenagogues, employed to hasten the menstrual flow, and gives several judicious directions, as to the clothing, and mental culture of the young female.

SUCCESSFUL (?) CASE OF TRANSFUSION OF BLOOD IN UTERINE HÆMORRHAGE.

The following interesting case was recently communicated to the Surgical Society of Paris by M. Nélaton.

Case. A young woman, aged 20, arrived at the full period of utero-gestation, was seized, in December 13, 1850, with labour pains. In consequence of the occurrence of hæmorrhage, she was removed to the Hospital of St. Louis, and placed under the care of M. Nélaton. The interne, M. Dufour, having ascertained that the hæmorrhage was caused by placenta prævia, judged it proper to hasten delivery. After having perforated the membranes, he gave the patient three doses of ergot of rye, each containing a gramme (15½ grains), at intervals of a quarter of an hour. The hæmorrhage still continued abundant; and an attempt was now made to turn the child, but the rigid neck of the uterus opposed an insurmountable obstacle. The vagina was then plugged; but this only partially restrained the flow of blood. The hæmorrhage had continued from 3 P.M. to 10 P.M., when M. Nélaton was sent for. He arrived at 11 o'clock, and found the patient in a state of immobility, with general coldness and extreme pallor of surface, the lips being as white as the skin; the eyes were half open, and presented the peculiar expression indicative of approaching death. The pulse at the wrist could scarcely be perceived, and the breathing was hurried. The first indication being to complete delivery, M. Nélaton performed the operation of turning. When the child was removed, two assistants compressed the aorta. With the view of more securely preventing hæmorrhage, M. Nélaton introduced his hand into the uterus to provoke it to contract. Warm cloths were placed round the body, and hot bricks were applied to the limbs, to recal the heat, and reanimate the circulation, which was now almost at a stand still. The patient took a quantity of warm wine with sugar, and afterwards some wine of Bagnols. In spite of all these means, the patient remained in the same state, and the pulse ceased to be perceptible for some minutes at a time.

At the end of an hour and a half, M. Nélaton determined to perform transfusion of blood. The interne on duty, M. Dufour, a strong and healthy young man, furnished the blood, which was received into a vessel heated to about 35 degrees centigrade, and immediately transferred to a hydrocele syringe, at the same temperature. In the mean time, M. Nélaton laid bare the cephalic vein, and applied two ligatures, one to interrupt the circulation and to prevent the return of a small quantity of blood through the lower end

of the vessel; the other, to guard against the introduction of air during the operation. The walls of the vein were divided obliquely, so as to form a V-shaped flap. The froth of the blood having been carefully expelled from the syringe, it was introduced into the vein. The piston was slowly pushed down, and the contents of the syringe, about 200 grammes. were impelled into the vein: this was immediately followed by the injection of an additional hundred grammes. None of the phenomena mentioned by authors, such as cries or local pain, were observed. The patient had some wine and water administered, and was ordered to keep the trunk and limbs wrapped in hot cloths.

The next morning, the state of the patient was completely changed. The skin was warm and moist, the pulse well developed, the breathing easy, and the intellect clear. She complained of much lassitude, and of thirst. As she manifested a desire for food, some broth was given her. This state of improvement continued for several days, with every promise of a favourable termination, as the lochia, and milk-fever, had appeared in a normal manner. Pains in the abdomen appeared on the seventh day, and the patient soon died of puerperal metro-peritonitis. (*Bullétin Général de Thérapeutique*, 30 Dec. 1850.)

PSYCHOLOGY.

SUICIDE IN THE ASYLUM.

Dr. W. A. F. Browne, in his *Eleventh Annual Report of the Crichton Royal Institution for Lunatics* (Dumfries 1850), has the following interesting remarks:—

"Three of the melancholics were suicides; and all wished for death while they dreaded it. Two of these have resorted to modes of destruction of such a nature as to baffle ordinary precaution and vigilance, and to show that the cunning and ingenuity of despair emulate the suggestions of reflection. A lady was placed for safety in a gallery where the gas was inaccessible, the furniture strong and unwieldy, and the fire-place protected by a guard. During the temporary absence of the attendant, the cap, or its lappets, were inserted between the bars of the screen, brought into contact with the coals, replaced on the head, and allowed to ignite the whole dress. The gown was woollen, and did not burn rapidly, but all portions readily combustible were consumed; the scalp, ears, hands, and other parts of the body were severely injured; but the sufferer gloried in her achievement, expressed no pain, nor contrition, nor fear; but was as calm and ecstatic as martyrs who have courted a similar fate. She recovered to reprobate her preservers as the obstacles of her triumph. Another person, who is constantly under the eye of the attendant, who sleeps at her side, and in the centre of a well-occupied dormitory, who has no obvious instruments nor opportunities to accomplish her purpose, yet discovers substitutes, and, so far as she can, employs them. At midnight she silently and stealthily tears her night-dress, endeavours to choke herself by stuffing the shreds into her throat, and subsequently swallows them in large quantities. These expedients have been resorted to repeatedly. It is believed that a third stratagem was meditated by a patient who had been prescribed, and was aware that she had been prescribed, the ext. cannabis Indicæ, a narcotic poison, and who declined to take the medicine at the hour directed, but was anxious to carry it to bed, and there, it is suspected, to hoard the successive doses until a quantity sufficient to produce death had been accumulated. This dexterous plan is not original. It has been previously practised elsewhere by a melancholic; but not, as in this case, defeated. The impulse to destroy life, like other sanguinary impulses, is so powerful, so often aided by deliberation, so fertile in resources, that although it may be eradicated by treatment, and modified by vigilance, it

cannot be invariably baffled, while an article of dress is left, or the necessaries of life provided. It affects minds in the full possession of those powers which render its accomplishment inevitable, and which are best adapted to elude suspicion, to deceive affection, and to counteract the provisions and specific arrangements in an asylum."

CASE OF FEIGNED MADNESS.

The *Annales Médico-Psychologiques* (October 1850, p. 661) records the following case, which formed the subject of a trial in Bavaria.

On the 28th of July 1849, a shepherd, aged 17, was arrested on a charge of having committed a horrible assault upon a girl, seven years old, and of having afterwards assassinated her, by shooting her in the head. The accused, at the moment of his arrest, freely confessed that he had committed the two crimes, saying that he had been instigated to commit them by the devil, that it was the devil who had loaded the gun, who had put it into his hands, had directed it towards the head of his victim, and that he (the prisoner) had done no more than pull the trigger. It appears that this ridiculous defence is not considered extraordinary, by those who are acquainted with the absurd superstitions which still exist among the country people of Bavaria. When the officers proceeded the next day to the residence of the accused, to convey him before the magistrate, an entire change had taken place in his demeanour. Although he was a young man who had always been distinguished by his vivacity and intelligence, he now appeared to have lost all his physical and intellectual faculties. He could hardly stand up, and when by great efforts he succeeded in raising himself on his legs, he tottered, and his knees trembled under him ; he could not move a single step without stumbling ; his head was continually inclined either forwards or backwards, or fell sometimes on one shoulder, sometimes on the other ; he uttered only isolated and incoherent words, and always stammered ; he said that his hearing was very bad, and it was impossible to obtain from him any precise answer ; lastly, he had entirely lost his memory, and he no longer recognized any one, not even his mother, with whom he had always lived. The magistrate selected two special physicians, MM. Windler and Zinck, to examine into the mental condition of the accused ; and these gentlemen, after having carefully observed his conduct, unanimously came to the conclusion that the moral and physical state of this individual was feigned. This opinion was founded upon the following considerations :—that the imbecility, to the degree in which the prisoner seemed to be affected, was always innate ; that there never was an example of a person so intelligent and healthy as the accused had been before his arrest, becoming suddenly imbecile and stupid ; and that besides, the imbecility of persons who have not evinced it from birth, is at first very slight, and increases gradually and slowly. In consequence of this opinion, the prisoner was observed secretly and continually, and as no change was remarked in him, it was resolved to expose him to violent sensations, to ascertain whether the suspension of the faculties were real or not. To this end, fire-arms were discharged in the middle of the night, close to the outside of the wall against which his bed was placed. The prisoner uttered inarticulate cries, but without moving from his bed. Powerful douche baths were poured upon him suddenly, through holes bored in the ceiling of his cell ; he was lodged in a hut, the roof of which was burnt during the night ; and he was exposed to other trials, but nothing altered his impassibility. MM. Windler and Zinck, and several other physicians, persisted in their opinion that this young man was feigning imbecility ; and he was ordered to be tried before the court of Augsburg. It was necessary to carry him to the court. He looked at first with a stupified air at all parts of the hall ; then he relapsed into his ordinary state, placed his arms on the balustrade before the prisoners' bench,

rested his head upon his hands, and went to sleep. It was in vain to shake him; nothing would move him; and it was impossible to interrogate him. The crimes of which he had been accused, were already admitted by himself; and, having been proved before the court by the evidence of numerous witnesses, the presiding judges strongly inclined to the guilt of the accused. The defence represented that, considering the state of the prisoner, there was great probability that, in committing the two crimes for which he was called to account, he had no consciousness of what he was doing, and consequently he could not be considered a responsible person. The judges observed to the jury that, in their deliberations, they ought not to regard the present state of the prisoner, but to endeavour to ascertain if, at the moment of the perpetration of the double crime, he had acted like a sane person. The jury, after deliberating half an hour, brought in a verdict declaring the prisoner guilty, but with weak imputability (foible imputabilité), namely, *that there were very attenuating circumstances.*[1] The prisoner was condemned to three years' imprisonment, and he was taken away from the court in the same state of lethargy as that which he had exhibited during his trial; but he had scarcely returned to his cell, when he began to jump with joy at having escaped capital punishment. He said that, since his arrest, he had never ceased to enjoy good health for a single moment; that he had been throughout in perfect possession of his physical and intellectual faculties; and that he had played his part, in pursuance of advice which had been given him by one of his fellow-prisoners, on the very day when he was consigned to prison. This villain seems to have exhibited, during the long space of fourteen months, a strength of will and of perseverance of the most extraordinary character; and it is the more astonishing, as he was only seventeen years old.

MECHANICAL RESTRAINT IN THE PROVINCIAL ASYLUMS OF FRANCE.

In the autumn of 1850, Dr. Webster visited eight of the provincial asylums of France; and has since published in Dr. Winslow's *Psychological Journal* an interesting account of what he saw and heard. The paper abounds with valuable matter; and the following extract is particularly interesting:—

"The numbers show, that forty-four male lunatics, out of 1464 then resident, were in camisole, some being also otherwise restrained; thereby giving one in restraint to every 33¼ male inmates; or three per hundred. Amongst the females the proportion was larger; seventy-two out of the total 1902 resident patients, being under mechanical coercion; *i.e.*, one female in restraint to every 26¼ inmates; or 3·78 per hundred. In contrast with this report, I place an official statement of the practice at Bethlem Hospital, during the same period. At this establishment, where formerly the strait-waistcoat, with various kinds of personal coercion, were in even greater use, than on the other side of the English channel, *not one insanæ patient*, amongst an average population of 391 lunatics, was under constraint of any description, during the five weeks ending the 20th of last September: when I first visited that institution, after my return from the continent, and which five weeks embraced the whole time referred to in my narrative".

[We are no advocates for the strait-waistcoat when it can be avoided; but let it be remembered, that it is often a less irritating means of restraint than the personal violence and brawny grasp of "the keeper".]

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[1] This verdict would never have been received in an English court of law. If the prisoner was of *weak imputability*, then he was not guilty of the crimes laid to his charge, and he ought to have been sent to a mad-house as a lunatic: if he was in his senses when the acts were committed, then he ought to have been executed. Editors of Lond. Journ. of Med.

DELIRIUM AND INSANITY DURING AND CONSECUTIVE TO ACUTE DISEASES.

In the *Annales Medico-Psychologiques*, October 1850, p. 586, M. Thore has written an article upon this subject.

The author regards pneumonia as one of the most common causes of insanity; and of twelve cases of acute diseases followed by delirium, no less than half were cases of pneumonia. He thinks that it and typhoid fever, are the diseases which predispose most to insanity. He relates two cases, in the first of which a pneumonia of the right lung, terminating by resolution, was followed by maniacal delirium; and, a year afterwards, the same patient was attacked by pneumonia, again terminating in resolution, but again followed by violent delirium with hallucinations: the result, however, being complete recovery, both from the pneumonia and the insanity. In the second case related by the author, the pneumonia and the insanity appeared to alternate with each other; for, on the occurrence of a decided amendment in the symptoms of the first disease, the patient was attacked with violent delirium, attended by hallucinations of sight and hearing, and by loquacity. These symptoms were relieved by baths, and opiates in large doses; but, with the return of reason, the symptoms of pneumonia reappeared. The patient, however, recovered from the pneumonia, and the delirium did not return. The author has also observed, that, in certain cases, the delirium is developed without any alleviation of the pulmonary symptoms; and the two diseases continue simultaneously. The third case is one of tonsillitis, attended by suppuration of the right tonsil; in this case, the pus was evacuated by an incision, and the patient was doing well; but he was attacked suddenly one morning with delirium, attended by hallucinations. He recovered under the use of mild opiates. In the next case, the delirium was developed during recovery from an attack of measles, in a man aged 27, who had never before or since manifested any symptoms of insanity, and who had never been addicted to intemperate habits. In this instance, the maniacal state lasted for twenty-four hours, and then it wholly disappeared. In the last case which is related, the patient was a boy of seventeen, who was attacked by typhoid fever, towards the termination of which several abscesses were formed in various parts of his body, and were opened. When the fever had ceased, symptoms of insanity began to appear, and his words and actions became strange and incoherent; although his bodily health improved, the disorder of the intelligence gained ground, and he was finally consigned to a lunatic asylum, where he died of cholera. The author concludes by remarking, that the form of mental alienation which succeeds acute affections, is very variable; most frequently it is only a fit of maniacal delirium, the duration of which varies, from fifteen or twenty hours to three or four days. It is violent, accompanied by great agitation, and with hallucinations of sight and hearing. It begins at the very moment when convalescence commences. It yields, in general, to a very simple treatment, or rather it is cured spontaneously. "We have often seen," says M. Thore, "individuals, who, in the hospitals where they had been treated for acute diseases, had been attacked with a fit of insanity, arriving at the Bicêtre perfectly cured, and not exhibiting the least disturbance of the intelligence. The cure had taken place during the removal." But although the delirium which occasionally follows such diseases as pneumonia and tonsillitis, is transient, that which follows typhoid fever is more serious and more lasting, as is well exemplified in the last case recorded by M. Thore in his very useful and instructive paper.

THE HOSPITALS OF LONDON. No. VI.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

THE VITAL STATISTICS OF HOSPITALS.

The following is introduced in this place, from the similarity of the general results to those of the London hospitals, as formerly alluded to in this department of the London Journal of Medicine; and as illustrated by Dr. Webster in the present number.

General Hospital at Vienna. The subjoined Statistical Reports of the General Hospital at Vienna for 1848 and 1849, are contained in the *Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien* for November and December 1849, and Sept. and Oct. 1850. If we could obtain room, we should like to reproduce them entire, as excellent models for the compilation of similar returns from the London hospitals. In the mean time, we have combined some of the statistics regarding the mortality in the institution at Vienna.

Table exhibiting the Rate of Mortality in the Wards of the General Hospital in Vienna, during the years 1848 *and* 1849.

		Admissions.			Deaths.			Percentage of Deaths on Admissions.		
		M.	F.	Total.	M.	F.	Total	M.	F.	Gen. Av.
Medical Wards	1848	6980	4109	11089	1220	770	1990	17·47	18·73	17·94
	1849	6122	3792	9914	1053	847	1900	17· 2	22·33	19·16
Both years.....		13102	7901	21003	2273	1617	3890	17·34	20·46	18·52
Wards for Diseases of the Chest	1848	316	249	565	42	40	82	13·29	16·06	14·51
	1849	269	253	522	46	42	88	17· 1	16· 6	16·85
Both years.....		585	502	1087	88	82	170	15·04	16·33	15·64
Wards for Diseases of Nervous System..	1848	144	125	269	27	26	53	18·75	20· 8	19· 7
	1849	193	114	307	49	24	73	25·38	21·05	23·77
Both years.....		337	239	576	76	50	126	22·55	20·92	21·87
Wards for Cutaneous Diseases	1848	2186	722	2908	27	40	67	1·23	5·54	2·30
	1849	1719	664	2383	42	43	85	2·44	6·47	3·56
Both years.....		3905	1386	5291	69	83	152	1·76	5·98	2·87
Wards for Diseases of Women	1848	..	705	705	..	133	133	..	18·86	18·86
	1849	..	541	541	..	111	111	..	20·51	20·51
Both years.....		..	1246	1246	..	244	244	..	19·58	19·58
Surgical Wards	1848	2635	1187	3822	252	143	395	9·56	12·04	10·33
	1849	2205	959	3164	179	103	282	8·13	10·74	8·91
Both years.....		4840	2146	6986	431	246	677	8· 9	11·46	9·69
Syphilitic Wards ..	1848	1262	858	2120	1	4	5	0·08	0·46	0·23
	1849	1075	966	2041	6	3	9	0·55	0·31	0·44
Both years		2337	1824	4161	7	7	14	0·29	0·38	0·33
Ophthalmic Wards..	1848	455	285	740	2	1	3	0·43	0·35	0· 4
	1849	385	235	619	0	2	2	0·00	0·85	0·32
Both years.....		839	520	1359	2	3	5	0·23	0·57	0·36

The preceding table points out distinctly the remarkable influence which certain classes of affections exert, in augmenting or diminishing the rate of mortality. Thus, in the surgical wards, exclusive of those devoted to syphilis and ophthalmic affections, the average mortality for the two years was 9·69 per cent.; but, if to the surgical cases we add the syphilitic and ophthalmic, the rate of mortality becomes diminished to 5·56 per cent.

The statistics of the obstetric, children's, and lunatic departments at Vienna are separately given in other parts of the Report; but we shall at present confine our notice to those classes which are specified in the table.

The Reports of the Vienna Hospital are, moreover, valuable for the tabular view which they give of the relative mortality from each disease. We have reproduced the Vienna statistics, thinking that it would be interesting to those engaged in medical statistics, and might also serve as a model for similar documents in some of our institutions. With this view, we have combined the results for the two years in a single table, omitting the short commentaries which are appended to each anatomical group of diseases.

Statistical Table of the Cases admitted into the General Hospital at Vienna, in 1848 *and* 1849, *arranged anatomically.*

	Admitted.		Discharged.						Died.	
			Cured.		Relieved.		Not improved.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
DISEASES OF THE BRAIN.										
Congestion	261	192	208	150	3	6	5	3	21	9
Inflammation	64	29	22	16	..	1	5	1	50	23
Tuberculosis	11	3	..	..	..	..	..	..	11	3
Apoplexy	71	70	8	11	5	3	4	6	43	35
Delirium	384	307	76	18	8	6	238	262	30	17
DISEASES OF SPINAL CORD AND NERVES.										
Inflammation	9	1	3	..	1	..	..	1	2	1
Intermittent Fever	1261	317	1169	286	9	3	9	1	14	6
Neuralgia	141	243	113	166	7	17	5	10	6	5
Convulsions	122	190	60	84	21	37	27	38	9	5
Tetanus	14	11	8	3	1	2	..	..	4	4
Paralysis	187	145	38	23	39	25	25	23	40	32
DISEASES OF ORGANS OF RESPIRATION.										
Catarrh	2614	1270	1975	955	68	45	36	26	301	127
Pleurisy	510	294	381	217	26	16	1	6	71	29
Pneumonia and Pleuro-pneumonia	694	440	500	261	10	13	3	2	140	120
Emphysema	118	40	8	7	43	22	14	1	23	6
Pulmonary Tubercles	1396	970	..	..	358	111	80	35	868	699
DISEASES OF HEART AND VESSELS.										
Endocarditis and Pericarditis	30	25	14	12	7	2	1	..	6	4
Organic Diseases of the Heart	117	188	..	..	53	66	12	20	39	69
Aneurisms	8	2	..	..	2	..	2	1	3	1
Phlebitis	9	18	1	8	7	5	..	2	..	3
Venous Swellings	20	..	17	..	1	..	..	..	1	..
Inflammation of the Lymphatics	52	13	35	9	5	..	1	..	4	..
DISEASES OF THE ALIMENTARY CANAL.										
Angina	253	230	230	206	2	6	1	4	6	2
Parolitis	17	8	11	9	..	..	..	..	1	..
Peritonitis	86	489	50	357	1	15	2	3	25	58
Gastritis	4	4	1	2	..	..	..	..	3	1

	Admitted.		Discharged,						Died.	
			Cured.		Relieved.		Not improved.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Gastric Catarrh	938	497	862	442	6	10	5	1	15	12
Degeneration of Stomach	17	16	..	..	1	2	3	2	9	9
Hæmatemesis	5	11	3	9	..	..	..	..	2	..
Intestinal Catarrh	433	272	338	235	7	1	9	..	40	23
Dysentery	33	25	21	15	..	1	..	..	9	5
Cholera	4	1	2	1	..	..	..	..	2	..
Lead Colic	10	..	8	..	..	..	..	..	..	..
Worms	7	15	5	11	..	..	1	..	..	..
Scirrhous Disease of Intestines	1	2	..	..	..	..	1	..	..	1
Prolapsus Ani	3	..	3	..	..	..	..	..	..	..
Hernia { Simple	73	41	57	13	6	3	2	2	5	1
Hernia { Strangulated	45	47	28	38	..	..	1	..	10	17
Hepatitis	12	11	12	6	..	1	..	..	..	2
Jaundice	47	34	36	30	..	..	1	..	9	4
Degeneration of Liver	10	8	3	2	3	..	1	2	3	2
Enlargement of Spleen	24	5	11	3	6	..	..	..	2	1
DISEASES OF THE URINARY ORGANS.										
Inflammation of kidneys	3	1	2	1	1	..	..	..	..	..
Granular degeneration of do	32	19	1	1	8	8	1	2	19	7
Diabetes mellitus	3	..	..	..	..	..	1	..	..	..
Catarrh and inflammation of the bladder	54	23	33	15	7	2	2	..	6	2
Paralysis of bladder	2	1	..	1	..	..	..	..	..	..
Calculus	18	..	11	..	..	..	..	..	3	..
DISEASES OF THE GENERATIVE ORGANS.										
1. Male. Orchitis	236	..	211	..	6	..	1	..	3	..
Hydrocele	45	..	34	..	3	..	1	..	1	..
Stricture	18	..	14	..	2	..	..	..	..	..
2. Female. Inflammation of uterus	..	79	..	48	..	8	..	1	..	18
Inflammation of ovaries	..	8	..	5	..	2	..	1	..	..
Inflammation of mammæ	..	63	..	43	..	5	..	1	..	3
Puerperal diseases	..	109	..	72	..	2	..	..	..	29
Diseased menstruation	..	280	..	162	..	17	..	20	..	48
Prolapsus uteri	..	45	..	21	..	7	..	9	..	3
Anteversion or retroversion of uterus	..	5	..	3	..	..	..	..	..	1
SYPHILITIC AFFECTIONS										
Blennorrhagia	1029	624	906	488	17	4	3	1	1	3
Ulcers	1523	776	1229	549	63	5	11	7	7	5
Secondary symptoms	417	643	293	481	24	4	7	5	9	9
DISEASES OF THE SKIN.										
Small-pox	754	688	637	553	1	..	..	..	53	67
Scarlatina	42	29	30	24	..	..	..	..	9	4
Measles	146	79	140	74	..	..	..	..	2	2
Itch	1552	218	1495	130	..	..	1	..	2	1
Pediculi	213	52	188	47	..	..	..	..	..	..
Non-contagious cutaneous disease { acute	204	85	184	76	5	2	..	..	2	2
Non-contagious cutaneous disease { chronic	699	246	538	146	59	34	17	4	7	8
Erysipelas	156	127	134	106	2	2	..	1	5	7
Excoriations	228	47	198	46	..	..	..	..	2	..

	Admitted.		Discharged,						Died.	
			Cured.		Relieved.		Not improved.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
DISEASES OF THE CELLULAR TISSUE.										
Phlegmon	180	110	144	88	7	6	1	5	6	5
Gangrene	76	77	33	21	8	1	1	2	21	12
Abscesses	392	197	246	117	34	20	14	9	35	19
Fistulæ	45	26	24	10	3	6	4	3	9	..
Tumours	425	288	298	174	34	32	27	4	22	34
Degenerative growths	338	186	149	78	59	23	39	12	53	46
Malformations	158	66	83	37	12	4	3	6	13	8
Contusions and wounds	816	183	557	141	35	1	7	1	119	18
Bitten by rabid dogs	14	3	10	2	1	1	..	..	3	..
Bitten by healthy dogs	23	5	14	4	2	..	..	..	..	..
Burns	39	24	30	14	..	..	..	..	4	7
Frost-bitten	101	22	85	18	1	..	..	..	3	..
DISEASES OF BONES AND JOINTS.										
Osteitis	82	67	49	41	8	5	7	2	3	6
Fractures	277	147	176	85	13	9	3	8	22	16
Caries	293	138	64	20	58	20	39	26	75	37
Degeneration	39	26	9	7	6	6	4	3	4	3
Synovitis	358	156	272	110	22	11	6	6	18	9
Dislocations	45	15	24	15	7	..	2	..	..	..
Distortions	61	44	23	14	12	5	4	2	1	..
Inflammation of muscles	28	11	13	7	1	1	1	1	3	..
GENERAL DISEASES.										
Senile debility	63	161	..	..	17	10	9	42	29	70
Marasmus	81	163	..	..	..	..	24	59	43	76
Chlorosis	..	184	..	158	..	7	..	1	..	3
Gout and rheumatism	1168	870	952	615	28	52	27	32	35	27
Rickets	3	3	1	..	2	..	..	1	..	..
Scurvy	76	15	52	8	2	..	2	..	18	5
Typhus	1790	889	1317	639	8	4	5	9	329	185
Cholera	165	227	73	88	1	..	1	..	89	132
Scrofula	214	72	70	19	44	15	15	4	52	28
Dropsy	342	332	179	136	23	22	11	13	98	123
Lithiasis	16	..	12	..	..	..	..	..	..	..
Mercurial poisoning	7	1	6	..	..	..	..	..	..	..
Poisoning	1	5	1	3	..	..	..	..	..	2
Moribund	22	20	..	..	..	..	..	..	22	20
Feigned diseases	41	12	35	12	1	..	..	..	..	..

The nosological classification adopted in the foregoing tables, is not unexceptionable,—bronchitis, for instance, being evidently included under the terms "catarrh" and "pneumonia". The system which is carried out, however, is highly laudable ; and the reports reflect great credit on the zeal and ability of Dr. Carl Haller, on whom has devolved the labour of drawing them up. We hope, before a very distant period, to see reports, of at least equal excellence, emanate from the London hospitals.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

Among the Egyptians, Greeks, and Romans, the treatment of diseases of the eye was mostly in the hands of oculists. Hippocrates, Celsus, Galen, and the Arabian physicians describe many ophthalmic diseases well, and frequently give judicious rules for their treatment; but *medici ocularii* were at the same time numerous, and have continued so in modern times, to the latter part of the last century.

At this period, the anatomy and physiology of the eye were generally neglected byp hysicians and surgeons; and the treatment of its diseases was left to oculists, men, for the most part, very imperfectly educated, who relied almost entirely on external applications, and treated the eye as if it was unconnected with the rest of the body, and uninfluenced by the state of the circulation, and the condition of the digestive organs.

Germany first attempted to recall the attention of the profession to the neglected science, by the production of works of the highest merit, by university lectures, by opening ophthalmic wards in the General Hospital of Vienna, and by clinical instruction. Scarpa also greatly advanced the science by his labours in Italy.

In England a few distinguished surgeons, as Pott and Hey, had a well-merited reputation for their skill in operating on the eye; and Cheselden had, still earlier, added to his fame by giving sight to a young man supposed to have been born blind: but the first public institution for the treatment of Diseases of the Eye originated with John Cunningham Saunders in 1804.

Mr. Saunders was educated at St. Thomas's and Guy's,—at that time united hospitals. Here he studied ten years; during eight of which he was demonstrator of anatomy at the former hospital. In October 1804 he published the first proposal, made in England, of founding a dispensary for the cure of diseases of the eye and ear: and the proposal being sanctioned by the physicians and surgeons of the above-named hospitals, and encouraged by the public, the London Dispensary for curing Diseases of the Eye and Ear was opened in Charter-house Square on the 25th of March 1805; and patients were received under the care of Mr. Saunders and Dr. Farre. In 1808, however, the treatment of diseases of the ear was relinquished, and the name of the institution altered to that of the London Infirmary for curing Diseases of the Eye.

In founding the Infirmary, Mr. Saunders had two objects in view; to apply his knowledge of ophthalmic disease to the relief of the afflicted poor, and to communicate instruction to the medical student. In accordance with these views, the institution has, from its foundation, been open to all indigent patients, without any restriction; and, in 1811, pupils were publicly admitted to observe the diseases, and their treatment by the medical directors.

The institution had only enjoyed the benefit of Mr. Saunders' valuable services five years, when his incessant application destroyed him by apoplexy, in the thirty-seventh year of his age. His short career allowed him little opportunity of communicating his experience to the profession. He published, during his life, a work on diseases of the ear, and a paper on iritis; but the principal part of his recorded observations and opinions was edited, after his death, by his friend and colleague Dr. Farre, in a *Treatise on some Practical Points relating to Diseases of the Eye.* This valuable work contains essays on inflammation of the conjunctiva in infants; on inflammation of the iris, and the use of belladonna; on some of the more important terminations of ophthalmia, etc.; to which is added an account of the author's method of curing congenital cataract, by which he had succeeded in giving sight to 52 patients out of 64, of whom 38 were from two months to seven years old at the time of operation.

Dr. Farre has the merit of having taught the application to diseases of the eye of the same general principles of treatment, by which similar morbid

processes are controlled in the organs, and especially of introducing the mercurial treatment of iritis. Mr. Travers, Mr Lawrence, and Mr. Tyrrell, in turn, succeeded to the chair from which Saunders had been removed by death: and the writings and lectures of these distinguished men, and the information acquired and communicated by their pupils, have accomplished, to a great extent, one of the grand objects contemplated by the founder of the institution, and have spread the knowledge of ophthalmic disease, and the benefits of that knowledge, over three parts of the globe. One of the most beautiful and accurate works that has yet appeared on diseases of the eye, is now in course of publication by Mr. Dalrymple, the present consulting surgeon of the hospital. It has more than once been introduced to the favourable notice of the readers of the London Journal of Medicine.

The number of patients has progressively increased from the opening of the institution to the present time. During the last four years the average annual increase has been 577, and during the last year 786.

NUMBER OF PATIENTS.

In 1805..... 600	In 1830.....5483	In 1849.....8686
1810.....2907	1840.....5520	1850.....9437
1820.....3704		

The total number of in and out-patients admitted from the opening of the institution in 1805, to December 31, 1850, is 217,706. The number cured of cataract and closed pupil during the same time is 2,361, including 306 born blind; no patient being entered a second time as a new case during the whole period of his attendance, however long. This is a tolerably large amount of good effected by a small institution in the city of London; but its utility is still more apparent from the good effected by its numerous ramifications. The total number of physicians and surgeons educated at this hospital to the end of 1850 is 1514. Many of these have themselves, or by their pupils, established similar institutions in Europe, Asia, and America. The first institution, on the model of the London Infirmary, was established at Exeter by Mr. Adams, afterwards Sir William Adams, on the joint recommendation of Mr. Saunders and Dr. Farre. The Royal Westminster Ophthalmic Hospital was opened after the death of Mr. Saunders in 1816, under the care of Mr. Guthrie, one of the earlier pupils. Others have since arisen in Dublin, Manchester, Birmingham, Salisbury, Bath, Brighton, Portsmouth, Plymouth, and in almost every large town in the kingdom. In 1850, the first Ophthalmic Infirmary was opened in Edinburgh; and in London itself two new Eye Infirmaries have in the last few years been opened and conducted by pupils of this hospital. In the year 1818, Mr. Richardson, one of its pupils, established the Madras Eye Infirmary, under the sanction and patronage of the Honourable East India Company, and during the first three years operated successfully on 381 cases of cataract. Subsequently Mr. Egerton and Mr. Jeaffreson were sent out by the East India Company to conduct similar institutions in Calcutta and Bombay. Assistant surgeon Richmond, of the 4th Light Dragoons, cured of cataract 789 inhabitants of Broach and Baroda in the short space of nine months.[1] Even in China, seven Ophthalmic Hospitals have been recently appointed. Meanwhile, other pupils have established the first Ophthalmic Institutions in the United States (New York), and in British and Spanish America.

In 1823, the Infirmary was removed from its original site to a new and more commodious building erected for it in Moorfields; and in 1837, the Queen having become its patroness, it was named the Royal London Ophthalmic Hospital. The present building is capable of accommodating eighteen in-patients. Nearly all the in-patients are admitted for operations, the majority being cases of cataract. Operations for cataract are usually performed on Friday, from the beginning of May to the end of October.

The hospital is supported by voluntary contributions, and is open daily to all indigent persons that require and seek its assistance. The average

[1] Bombay Courier, March 1827.

expense of each patient is less than two shillings; and the total expense of 1850 does not at all exceed the average total expense of the last ten years, notwithstanding the number of patients has nearly doubled in that time. But the income of the hospital falls far short of its necessary expenses, which have seriously encroached on its small permanent resources. The deficiency of 1850 is stated to have been nearly £250. An earnest appeal has therefore been made to the public by the committee, with the view of obtaining such support as will maintain the hospital in a state of efficiency, and meet the increasing demands on its resources.

NORTH LONDON EYE INFIRMARY.

Clinical Notices. The *changeable weather* which has characterised this spring, has kept the cases of rheumatic and catarrhal affections above the average. Simple treatment by purging, counter-irritation, and astringent collyria, have generally sufficed to cure the latter; but in two cases, obstinate ulcers ensued, and complicated the case; eventually, the eyes recovered under the use of bark and soda, nitrate of silver collyrium two grains to the ounce, night and morning, and a blister kept open behind the ear.

The preparations of *super-phosphate of iron*, prepared by Mr. Greenish at the suggestion of Dr. Routh, have been tried with decided advantage. It appears to be a mild tonic, and possesses the peculiar recommendations of neither discolouring the fæces nor constipating the bowels.

Hordeolum, or "stye", has been singularly rife; Mr. White Cooper has had twenty-six cases of this description in public and private, in the last two months, and all sufficiently bad to cause the patients to seek advice. Frequent fomentation with infusion of poppies, to which a portion of extract of opium has been added, and hot poultices with the same addition, afford the greatest relief; and where there is evidence of matter, the stye should be opened; this should be done with a sharp lancet, and quickly, as the part is exquisitely sensitive.

Many persons are subject to small *tarsal tumours*, which cause them much annoyance. They appear to be due, in some instances, to constitutional derangement, one succeeding another with provoking pertinacity; but they are not unfrequently a consequence of hordeol. If the troublesome little boil so called does not fairly suppurate and discharge its contents, the inflammation will pass away, leaving a small hard swelling; the parietes of this are sometimes so tough as to require some force to pierce them with a sharp knife. The treatment in use at this Infirmary is to evert the lid, lay open the cyst, and rub its interior with a small button of nitrate of silver at the point of a fine probe; some inflammation follows, with suppuration, and the cyst disappears. In small cysts, subcutaneous excision with a cutting needle answers well, and is less painful than the other proceeding.

Very bad cases of *lippitudo* occasionally present themselves, but yield to the following treatment. The raw ulcerated margin of the lid is lightly touched with nitrate of silver once or twice, and subsequently with sulphate of copper two or three times, at intervals of a few days; the lids are anointed night and morning with the diluted ointment of the nitrate of mercury, and the general health attended to; which latter is a matter of importance. The alum collyrium, four grains to the ounce, is a useful adjunct to the other treatment. Lippitudo and tinea are common disorders among the lower orders of the Hebrew persuasion.

It is a matter of importance not to use the tartar emetic ointment on the temple, as it occasionally leaves indelible marks, which are unsightly, especially in females. The croton oil liniment is preferable; but that also occasionally produces considerable discomfort, by the irritation extending to the lids and face, and puffing those parts considerably. Blisters, the size of a shilling, applied to the temples, cause sufficient irritation for ordinary cases, are manageable, and can be repeated at short intervals. Albespeyer's paper,

and Brown's cantharidine tissue, are useful especially with the higher orders, who often have much repugnance to the application of an ordinary blister. With children a few threads of worsted, smeared with blistering ointment, and placed behind the ear, is a useful and efficacious mode of exciting counter-irritation.

Collodion. Mr. Bowman has spoken of the advantage afforded by collodion in the treatment of wounds in the neighbourhood of the eye. In this, Mr. White Cooper fully concurs, having seen the greatest advantage follow its use in operations for entropion. The following is an example. Mr. G., a large, stout farmer, seventy-three years of age, consulted Mr. C. for entropion, in 1849. It had existed during eight months, and the irritation of the lashes against the eye was very distressing. There was a redundancy of puffy, loose skin about the lower lids ; and the deformity was entirely removed by pinching up a fold of it. On the 2nd of July 1849, an elliptical piece of integument was cut away from the right lower lid, the edges carefully approximated, and two sutures inserted. The skin being then dried, collodion was applied ; as it dried, the contraction of the integument was most marked. On the 5th instant, only three days after, the collodion was removed, and the wound found to be healed, except at the points of the sutures. A similar operation was performed on the left eye, and three days sufficed for the union of that wound also.

The only objection to collodion is the acute smarting it causes when first applied to a wound ; but, as that passes away in a few minutes, it is a matter of little consequence. The great tendency to evaporate, which is characteristic of collodion, is best counteracted by turning the bottle down, with its neck in water.

MORTALITY IN THE LONDON HOSPITALS.

The following very valuable article appears in the instructive weekly publication of the Registrar-General for May 17th.

"The table below illustrates two methods of exhibiting the mortality of hospitals and public institutions with rapidly changing populations. The cases which passed through each hospital were returned by the resident officers ; the average number of resident sick was deduced from five quarterly enumerations ; and the mean term of residence, in days, was obtained by multiplying the hospital population into 365, and dividing the product by the number of cases.

"It will be observed that in 1850, 11 of the general hospitals of London had 2736 resident patients, and that 2200 deaths took place in the year ; the mortality on the population was therefore more than 80 per cent. The patients only remained, on an average, 34 days in hospital ; 29,161 passed through the wards ; and the mortality was therefore 7·54 per cent. in the 34 days. About 92 in 100 who enter leave the London hospitals alive.

"The average number of lunatics, in eight of the large asylums, was 3,451 ; the deaths in the year 1850 were 380 ; the *annual* rate of mortality was therefore 11 per cent. But the patients remained more than two years (2·21) in these asylums ; and only 1,565 were discharged recovered, relieved, unrelieved, or dead ; consequently 24 in 100 cases terminated fatally, and of 100 who enter, 76 leave the asylums alive.

"In the *Fever Hospital* there were 19 deaths to 100 cases under treatment on an average 26 *days*, which implies that the rate of mortality was 256·76 deaths annually to every 100 patients constantly resident (100 occupied beds). In the *Consumption Hospital* 23 deaths occurred in 100 cases under treatment about 107 days ; the rate of mortality implies, therefore, that among a population consisting exclusively of persons labouring under consumption, the mortality would be 78·82 per cent. *annually*.

"The one column (5.) shows the mortality of such cases as are sent to hospitals, not during their whole course, but during the term of treatment : the

other column (6.) exhibiting the mortality out of a given number of sick during a given time (a year), indicates the intensity of the mortality in different diseases and hospitals.

"All the cases of illness in the army, slight as well as severe, are treated in the military hospitals: to the civil hospitals only cases of some severity are admitted; the mortality is therefore very different. Some of the differences in the mortality of other hospitals arise from the same cause; others are accidental.

HOSPITALS OF LONDON. 1850.

Number of Cases treated—Patients Resident, or Population—Deaths—Term of Residence—Deaths to 100 *Cases—and Annual Deaths to* 100 *of the Sick Population.*

	Total Cases Discharged, Cured or otherwise, or Dead, 1850.	Average Term of Residence in Hospital.	Average Number of Sick in Hospital.	Deaths Registered in 1850.	Deaths to 100 Cases.	Deaths to 100 Beds, assumed to be continually occupied by Patients.
GENERAL HOSPITALS.		Days				
St. George	3006	32	264	231	7·69	87·50
Westminster	1658	31	141	138	8·32	97·87
Charing Cross	1101	33	98	70	6·36	71·43
Middlesex	2568	36	256	189	7·36	73·83
University College	1131	35	108	128	11·32	118·52
Royal Free	766	22	46	37	4·83	80·44
King's College	1305	29	105	132	10·11	125·71
St. Bartholomew	5557	32	491	372	6·69	75·76
London	3870	30	317	278	7·18	87·70
Guy's	4037	43	476	357	8·84	75·00
St. Thomas	4162	38	434	268	6·44	61·75
Total (or average)	29161	34	2736	2200	7·54	80·41
HOSPITALS FOR SPECIAL DISEASES.						
Small Pox	314	17	15	56	17·83	373·33
Fever	513	26	37	95	18·52	256·76
Lock	397	48	52	..	..	..
Consumption	289	107	85	67	23·18	78·82
Total (or average)	1513	46	189	218	14·41	115·34
MILITARY AND NAVAL HOSPITALS.						
Grenadier Guards'	1320	22	80	29	2·20	36·25
Coldstream Guards'	878	15	36	17	1·94	47·22
Scots Fusilier Guards'	602	36	59	11	1·83	18·64
Royal Ordnance	4977	21	285	38	·76	13.33
Dreadnought Ship	2121	25	144	78	3·68	54·17
Total (or average)	9898	22	605	173	1·75	28·60
LUNATIC ASYLUMS, ETC.		Years				
St. Luke	203	·97	196	15	7·39	7·65
Hoxton House (Miles')	123	3·23	397	45	36·59	11·34
Bethnal House (Warburton's)	156	3·38	528	47	30·13	8·90
Grove Hall	152	2·66	405	54	35·53	13·33
Bethlem	394	·98	387	35	8·88	9·04
Surrey New County	234	3·16	739	95	40·60	12·86
Peckham House	184	2·60	478	49	26·63	10·25
Camberwell House	119	2·70	321	40	33·61	12·46
Total (or average)	1565	2·21	3451	380	24·28	11·01

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

March 15, 1851.

Edward W. Murphy, M.D., President, in the Chair.

The Mammillated Condition of the Legs in Certain Cases of Dropsy. By T. Nunn, Esq. In certain cases of dropsy, especially in those depending on chronic heart-disease, towards the closing stage of that malady, when the legs have become infiltrated with fluid, and when the distension of the skin has arrived at a pitch which seems to threaten its vitality, it will be found that the cuticle gradually cracks, and an exudation of serum takes place. The skin does not retain the waxy whiteness of anasarca, but changes to a reddish hue, or the cuticle separates from the true skin, and serum is poured forth. The surface next becomes uneven, and, within a few weeks, the whole leg, from the ankle to the knee, is studded with elevations, varying from the size of a pin's head to that of a pea; and in some parts they are grouped together, so as to form larger protuberances. They are moist and shining; around their base is a whitish pasty secretion, and serum oozes from their surface. A brownish-green staining encircles the limb above the tuberculated part in some cases. This state is a result of anasarca, widely different from the ulceration following the formation of bullæ, or the large open sores produced by the separation of sloughs. It is attended with a great deal of pain and smarting. When the tuberculisation of the limb is fully established, a profuse discharge of serum takes place. The fluid secreted has a peculiar faint sickly odour; it amounts to many ounces in the twenty-four hours. In proportion to the extent of the tuberculisation, and the amount of the discharge, is the relief experienced from the oppression of the vital symptoms, particularly of the respiration. When the discharge is checked from any cause, even for a few hours only, it is followed by cerebral disturbance and congestion, and by uneasiness about the cardiac region. In course of time, the mammillations shrink, the exudation becomes scanty, and at last entirely ceases, the leg being covered with a dryish scurf. Mr. Nunn believed this process of mammillation to be an effort of nature for the relief of the patient.

March 22, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Prison Discipline. By Forbes Winslow, M.D. This paper contained an elaborate examination of the various systems of prison discipline, and of their influence on the bodily and mental condition of the inmates.

March 29, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Symptoms, Diagnosis, and Treatment of Functional Diseases of the Uterus. By T. Snow Beck, M.D. This paper appears as an original article at p. 417 of our last number.

April 5, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Excision of the Astragalus and Os Calcis. By Thomas H. Wakley, Esq. After some remarks on the subject of excision of joints, Mr. Wakley related the case of William Brown, on whom he performed, in December 1847, the operation of removal of the astragalus and os calcis for caries of these bones. The man recovered perfectly, and could now walk well. He was shewn to the members of the Society by Mr. Wakley a few evenings before the reading of this paper.

April 12, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Diagnosis of Inflammatory Diseases of the Cervix Uteri; Use of Potassa Fusa, or Potassa cum Calce. By J. Henry Bennet, M.D. This paper appears as an original article at p. 448 of our last number.

April 19, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Symptoms of Pulmonary Consumption. By John Hutchinson, M.D. The author desired to direct attention to three points: 1. Loss of weight; 2. Diminished breathing movements; 3. Morbid breathing sounds.

Loss of weight is a constant and primary sign; and there is no evidence of phthisis when the weight is undiminished. A person may lose weight and not have consumption; but he cannot have consumption without losing weight. The chest next changes in form and movement in respiration. The healthy chest is erect; the shoulders point backwards, and the deep inspiration is symmetrical, and swells out plentifully under the hand when laid over the upper ribs. The phthisical chest is not *erect;* the shoulders incline inwards and forwards, and the movement in respiration is more limited and pinched, as well as often non-symmetrical. The volumes of air expired were shewn to vary greatly in the healthy and in the diseased cases.[1] The morbid sounds are primarily of two kinds: sounds affecting the volume of air entering, as harsh, deficient, feeble; and, secondly, sounds produced by morbid secretions.

Loss of weight, diminished chest mobility, and morbid sounds, appeared in regular order: the third cannot exist without the second, nor the second without the first sign. They might exist without phthisis; but, when indicative of phthisis, their character was well-marked.

MISCELLANEOUS INTELLIGENCE.

Society of Apothecaries. The Court of Examiners of the Society of Apothecaries of London have lately come to a resolution, which is likely to exert a most considerable and a most beneficial influence upon the education of the general practitioners of this country. They have evinced their willingness to abandon the ordinary practice of testing the classical acquirements of their candidates in Celsus and Gregory at the termination of their medical studies, and have substituted a general classical and mathematical examination at the commencement of them. Students are to be admissible to this examination at any time, from the date of their apprenticeship to the termination of their first winter course of lectures. The object of this regulation appears to be twofold; first, to ascertain whether the student possesses sufficient general knowledge to enter upon the career of medical study, or whether he should not rather devote some months longer, or another year, to the acquisition of preliminary information; and secondly, to supersede the necessity of directing the student's attention to the Latin language, at a time when he has many other matters of more consequence to occupy his time. The subjects of the examination will be taken from those preliminary studies which are taught at every good school, and an attention to which is generally considered to be indispensable to the education of a gentleman. The subjects at present chosen are, the New Testament in Greek, the First Book of the Æneid, the Oration of Cicero pro Milone, the First Book of Euclid, and the principles of Arithmetic and Algebra. With the senti-

[1] See article "Thorax", in Cyclopædia of Anatomy and Physiology.

ments expressed in this Journal on the subject of the education of the Medical Profession, it is quite impossible for us to do otherwise than to accord to this plan our warmest commendation ; and our only regret is, that some such plan has not been adopted long ago. Admission into the church can only be gained through the portals of literature and science : and classical or mathematical examinations, or both, are now rendered imperative upon those who wish to enter the army, the navy, the East India Company's service, or even the merchant service ; and we should blush to think that our own honourable profession should lag behind in the general march of knowledge. A contemporary has remarked upon the extraordinary circumstance that the Court of Examiners of this Society, with the prospect of their own extinction before their eyes, should be devising and carrying out schemes for the amelioration of the profession : but we see no more anomaly in their doing so, than in a man making a just and equitable distribution of his property before he leaves the world. The Apothecaries' Society may or may not be abolished as an examining body; but the examiners deserve credit for sowing good seed, the fruit of which may probably be reaped by others. We are bound to say that their efforts are praiseworthy ; and whoever may be the parties who may eventually carry out their designs, we heartily wish them success. We ought to mention, that the Examiners of the Society intend to conduct the examination themselves ; that the first examination will be held on the third Saturday in October of the present year; and that no fee whatever will be required from the student.

The Resolutions above alluded to are the following :—

"At a Meeting of the Court of Examiners held at Apothecaries' Hall, March 10, 1851. It was Resolved unanimously,—

"1. That a preliminary examination for the junior students of the medical profession would be desirable, as an important auxiliary to their subsequent medical studies.

"2. That such examination should comprise an inquiry into the student's knowledge of the Latin and Greek languages, and of the elements of mathematics.

"3. That students should be admissible to such examinations at any period from the date of their apprenticeship to the completion of the first winter session of their curriculum.

"4. The such examination should, in the first instance, include the following subjects,—viz.:

"I. The First Book of Virgil's Æneid and Cicero's Oration for Milo.

"II. The Greek Testament, to the end of the Acts of the Apostles ; or, the First Book of Xenophon's Anabasis, at the option of the candidate.

"III. Algebra, as far as simple equations.

"IV. The First Book of Euclid's Elements.

"5. That students who pass this examination satisfactorily, should not be subject to any subsequent examination in Latin, except the *Pharmacopœia Londinensis* and prescriptions.

"6. That students who have not passed this examination should, for the present, be allowed as heretofore, to undergo the preliminary examination in Celsus and Gregory, after they have completed two winter sessions of their medical studies."

Liberal Proceedings of the Council of the Royal College of Surgeons. We are happy to lay before our readers the following resolutions adopted by the Council of the College of Surgeons on the 19th and 24th of March 1851. It is a remarkable coincidence that the Resolutions of the Court of Examiners of the Apothecaries' Society should have been passed only about a week before those of the Royal College of Surgeons. We have reason for believing that neither of these bodies was aware of what the other was doing. The steps taken by the Council of the College are meritorious ;

and as their present liberal conduct is in complete contrast to their celebrated manifestoes, issued hardly a year ago, we accord to their present proceedings a double meed of praise. We doubt, however, the necessity of handing over the General Practitioners to be examined by the College of Physicians, as we think that there are a sufficient number of fellows and members of the College of Surgeons, who are competent to act. We regret to find that not a syllable is mentioned of any preliminary examination ; a matter which we hold to be of the highest importance. We see no reason why Greek, Latin, and mathematics are to be reserved for the Fellows and withheld from the Members, any more than we could understand a system for giving classical and mathematical knowledge to bishops, and denying it to the parochial clergy.

The following are the RESOLUTIONS referred to :—

"1. That in the opinion of this Council, such parts of the charters and bye-laws of the College as restrict the eligibility to the Council to fellows residing and practising surgery within five miles by highway or road from the General Post-office in St. Martin's-le-Grand, should be abrogated.

"2. That in the opinion of this Council, such parts of the charters and bye-laws of the College as restrict the eligibility to the Council to fellows not having during the five preceding years practised *midwifery or pharmacy*, and require a certificate thereof by three fellows, should be abrogated ; and that instead thereof, a certificate by *three fellows*, and a declaration by *himself*, that the person nominated to be balloted for as a member of the Council does not practise as *an apothecary*, be required.

"3. That it is the opinion of this Council, that the medical qualifications of those about to engage in the *practice of surgery*, or in general practice, should be tested by the Royal College of Physicians.

"4. That the Council of this College are prepared to form and superintend a Board of Examiners in midwifery, or to cooperate with the Royal College of Physicians in the institution of examinations for testing the qualifications of practitioners in midwifery. (By order),

"EDMUND BELFOUR, Secretary."

CALDER MARSHALL'S STATUE OF JENNER. At length there is a prospect of a suitable monument being erected, in London, to Jenner,—one of the brightest ornaments of the medical profession, and one of the greatest benefactors of the human race. All honour to our Wellingtons and our Nelsons, and let them have the homage of the nation for which they so nobly fought and conquered ; but it is not one, but all nations, who have, and shall have, to bless the achievements of an Edward Jenner. Most fitting, therefore, is it to find the work of Mr. Marshall adorning one of the main avenues of the Great Exhibition of the Industry of all Nations ; and bearing upon it, that it is to be erected, in bronze, by contributions from the men and women of every country and of every clime. We believe that a most influential committee is at the head of this movement ; but we fear that no adequate means have yet been taken to correctly and widely apprise the public, and the medical profession, of what is contemplated. We would suggest that a public meeting be convened, under the presidency of one of the noblemen or gentlemen who sit in the committee ; and that a number of places be immediately appointed in London for the reception of subscriptions. The rates should perhaps be limited to a few pounds, and the smaller contributions of the masses be greatly relied on. The larger contributors might receive a miniature copy of the statue. A complete list of all the contributors, with their occupations and residences, should be kept, and printed. As more than the necessary sum may be raised, the possible surplus should at once be destined for some appropriate object,—say the formation of a fund for granting annuities to decayed members of the medical profession, to be called "THE JENNER FUND". We hope the committee will, without delay, inform

the public of the exact amount required for the erection of Mr. Marshall's statue in bronze, and of what they propose doing with the surplus, should such remain after the completion of their enterprise. We shall be glad to receive and publish the necessary information on these points. Dr. John Conolly, of Hanwell, is Acting Chairman of the committee; and George Vere Irving, Esq., of 10, Ampthill-square, is the Acting Honorary Secretary.

Resolutions unanimously adopted by the Royal College of Physicians of Edinburgh, regarding Practitioners of Homœopathy. We have much pleasure in giving publicity to the subjoined Resolutions. We hope that the London and Dublin Colleges will see the necessity of issuing similar manifestoes; *and of acting up to them.* Does Dr. William Henderson —the Homœopathic Professor of Pathology—still hold his Fellowship in the Edinburgh College of Physicians? We believe that a technical difficulty might interfere with any attempt at ejecting him from the University which he disgraces; but surely the College of Physicians has the power of expelling him from their body, if he do not voluntarily retire.

Resolutions. "At Edinburgh, and within the College Hall there, the 9th day of May 1851, an Extraordinary Meeting of the Royal College was held, pursuant to a Resolution agreed at the last Quarterly Meeting, and of which Extraordinary Meeting due notice was given.

"The President in the Chair. The following Resolutions were moved, seconded, and unanimously agreed to:—

I. That the Royal College of Physicians of Edinburgh did, several years ago, publicly express its opinion of Homœopathy and Homœopathic Practitioners, by peremptorily declining to admit into its body a Candidate for its Fellowship who belonged to that denomination; and, consequently, that no Fellow of the College can possibly be ignorant of the light in which all those who practise Homœopathy are regarded by the College.

II. The College regrets that, notwithstanding this decided expression of its opinion, more than one of its Fellows, after being admitted in a different character, have endangered the reputation of the College by becoming Homœopathic Practitioners; and the College expresses an earnest hope that these Fellows, seeing they have thus virtually separated themselves from the College, will spontaneously sever their further connexion with an Institution which repudiates them, and from which they can derive, as merely nominal Fellows, nothing else than a false position and a spurious credit.

III. The College feels the more bound thus to express its opinion, seeing that those Fellows who have become Homœopathists, and any other Medical Practitioners who follow Homœopathy, must necessarily be aliens to the other Fellows, and to the profession at large; inasmuch as no Fellow of this College, or any other Physician can, by any possibility, without derogating from his own honour, and from the honour of the profession, meet Practitioners of Homœopathy in consultation, or co-operate with them in the other common duties of professional life.

IV. That although the College has not thought it expedient hitherto to take any active steps for disclaiming those Fellows who have become Homœopathic Practitioners subsequently to their admission to the College, nevertheless, since it has the power of dealing summarily with those who act in a manner so unbecoming the character of a Physician, it reserves its right to exercise that power when it shall be so advised.

Signed in Name, and by Authority, of the College,

J. Y. Simpson, *President.*"

Next Meeting of the Provincial Medical and Surgical Association. The attraction of the Crystal Palace is so universally felt, that it is necessary to remind our readers that in making their engagements to see its contents, they should not forget the Anniversary Meeting of the Association, to be held at Brighton, on the 13th and 14th of August next. To those who can only leave home for a limited period, we would observe that the two objects may easily be combined, as Brighton is now reached from London in a couple of hours. (*Prov. Journal*, 28 May.)

Medical Students, and Unqualified Assistants practising Medicine. The Manchester Medico-Ethical Association have directed attention to this wide-spread abuse. We believe that the druggists of the present day, who prescribe, and who drive so lucrative a trade, commonly endeavour to obtain a smattering of knowledge by serving as visiting assistants with general practitioners: and many of this class first get into practice by fourpenny draughts and counter consultations; and then, if the neighbourhood require it, they whitewash themselves by passing the College or the Hall. Many unqualified practitioners are regular readers of new medical works, especially of the lighter medical periodicals. We think the profession might do something towards protecting themselves from the abuses referred to in this paragraph.

Sydenham Society. The Anniversary Meeting was held on the 1st May at half-past eight p.m., Mr. Phillips, F.R.S., Vice-President, in the chair. The Annual Report stated that there were about 2,000 subscribing members. The balance in hand was about £700. Mr. Rogers inquired as to the duties of the Secretary, and remarked on the large salary paid him, while the secretaries of the other medical societies of the metropolis served gratuitously. Some points of pecuniary importance he next touched upon, more especially with reference to £495 : 17 : 6 having been expended in one year in editorial charges. He finally commented on the fact, that few, if any, General Practitioners were on the Council, although the Society was mainly supported by them. This spirit of exclusiveness was owing, he thought, to their unwillingness to admit fresh blood into the corporation. The Secretary said, the average expense of editing was £100 per volume, and that of the twenty-four members of Council, five were General Practitioners. Dr. Copland spoke highly of the Secretary's services, and said he revised the productions of the Society before going to press. The following is the list of the new officers of the Society:—President, Sir James Clark, M.D., Bart., F.R.S. Vice-Presidents: W. P. Alison, M.D., F.R.S.; Sir John Richardson, M.D., F.R.S., K.C.H.; R. Cusack, Esq., M.R.I.A.; J. A. Paris, M.D. F.R.S., President of the Royal College of Physicians; J. A. Symonds, M.D.; B. Phillips, Esq., F.R.S.; R. Dunglison, M.D.; J. Hodgson, Esq., F.R.S.; C. Locock, M.D.; T. Shapter, M.D.; Sir C. Hastings, M.D.; A. D. Anderson, M.D.; T. Turner, Esq.; Professor Miller; A. Robertson, M.D., F.R.S. L. and E.; T. Watson, M.D., F.R.S. Council: E. F. Lonsdale, Esq.; E. L. Birkett, M.D.; A. B. Garrod, M.D.; W. R. Basham, M.D.; Golding Bird, M.D., F.R.S.; W. D. Chowne, M D.; T. G. Balfour, M.D; Marshall Hall, M.D., F.R.S.; James Copland, M.D., F.R.S.; H. Powell, M.D.; R. P. Cotton, M.D.; John Forbes, M.D., F.R.S.; R. Quain, Esq., F.R.S.; E. Headland, Esq.; J. Hilton, Esq., F.R.S.; W. F. Barlow, Esq.; W. J. Iliff, Esq.; J. Pereira, M.D., F.R.S.; O. M'William, M.D.; C. C. de Morgan, Esq.; E. H. Sieveking, M.D.; J. W. Woodfall, M.D.; D. Maclachlan, M.D.; R. Partridge, Esq.

Royal Medical and Chirurgical Society and the Great Exhibition. At the close of the meeting of this Society on Tuesday last, the President announced that the Council had authorised him to admit foreign medical men visiting the metropolis, on the recommendation of a Fellow of the

Society, to attend their meetings during the remainder of the session, and also to avail themselves of their extensive library and reading-rooms.

Recent Prevalence of Small-pox throughout England. From the Registrar-General's Report of the first quarter of 1851, just issued, we transcribe the following illustrations to prove this prevalence, as likewise to show how much yet remains to be accomplished, ere the great benefits of vaccination are diffused throughout the entire population. From the above document it appears, that in St. Mary's District, Shrewsbury, amongst 13 fatal cases of small-pox, only one had been previously vaccinated. In Willenhall, Wolverhampton, out of 22 deaths by the same disease, 16 were unprotected. In Rowley Regis, Dudley, small-pox was also very prevalent, and the Registrar states, in no death by this disease had the patient been previously vaccinated. In another district of Dudley, out of thirteen deaths, ten were unprotected; whilst in a third division of the same town, among 58 deaths by variola, 30 were without previous vaccination. Again, in St. Mary's, Birmingham, amongst eighteen deaths by small-pox, only two or three were protected. In Aston, twelve deaths are likewise reported, nearly the whole being without vaccination. In Runcorn, out of forty fatal cases by variola, only three were vaccinated. Further, in one district of Oldham there were twenty-five deaths by small-pox, the greater portion of whom were unprotected; and, in the north division of Leeds, out of thirty-eight fatal cases twenty-six were never vaccinated; whilst in one district of Rochdale, all the eight deaths, registered from variola, never had been vaccinated. Other illustrations, of the same description, might be quoted; but it is superfluous to pursue the subject farther, excepting to observe, that in various localities there appears, it must be admitted, something more than want of attention on the part of parents in neglecting to take their children to the parish medical officers to be vaccinated, so prejudiced do they still seem against cow-pox, and also exceedingly doubtful with regard to its prophylactic virtues. It is, however, satisfactory to mention, on the other hand, that exceptions to the above lamentable ignorance, regarding the real value of vaccination, are occasionally met with; thus, in one district of Stockport, the local registrar reports, "It is now more than three years since I registered a death from small-pox, out of a population of between 12,000 and 13,000; which I attribute to the appointment of public vaccinators, and the attention parents now pay to the vaccination of their children". This fact is refreshing to hear, and ought to be held up for general imitation; for, if followed, variola might disappear, or, at all events, be of very rare occurrence.

APPOINTMENTS.

Gill, Dr. William, elected, by the Subscribers, Physician to the Nottingham General Hospital, on the 24th April, on the resignation of Dr. J. Calthorp Williams.

Massey, Dr. Isaac, appointed, on the 26th April, by the Magistrates, Surgeon to the Nottingham County Goal, in room of Mr. Henry Attenburrow, resigned.

Wright, Dr. Thomas, elected, by the Subscribers, Surgeon to the Nottingham General Hospital, on the 24th April, in room of Mr. Henry Attenburrow. resigned.

OBITUARY.

Baker, Dr. Edward, late of Walcot Terrace, of consumption, on the 17th May.

Kennedy, Dr. James, of Woodhouse, Leicestershire, at 24, Great Russell Street, Bedford Square, on the 9th May, aged 70. Dr. Kennedy had retired from practice.

Marshall, Dr. Henry, on the 12th May, after a protracted and painful illness. Dr. Marshall was born at Kylsyth, near Glasgow, in 1775. He studied medicine at Glasgow, and in 1803 became Surgeon's Mate in the navy, a service which he soon left; and, in 1805, was appointed Assistant-Surgeon to the Forfarshire regiment of militia. In 1806, he became Assistant-Surgeon to the 1st battalion of the 89th regiment, and proceeded with it to Ceylon, in which island he remained till the spring of 1821. In the same year, he was appointed to the staff, and stationed at Edinburgh. After two years, he went to Chatham, and from thence went to Dublin, as Surgeon to the recruiting depôt; from that time till 1830, Dr. Marshall was actively engaged in his public duties. He was then gazetted as Deputy Inspector-General of Army Hospitals, and retired on half-pay. About this time he settled in Edinburgh, where he remained till his decease. Dr. Marshall was the instrument of many useful reforms being adopted with reference both to the moral and hygienic management of soldiers. His contributions to statistics and to military medicine are of great value. Besides numerous monographs in periodicals and Parliamentary Returns, he was the author of the following works: *On the Medical Topography of Ceylon; On the Enlisting, Discharging, and Pensioning of Soldiers; The Military Miscellany; Description and Conquest of Ceylon; On the Feigned Diseases of Soldiers*, etc., etc.

Phillips, Richard, F.R.S.L. and E., F.G.S., on the 11th May, aged 72, having outlived most of his contemporaries in the field of chemical science. He was the friend and associate of Davy and Wollaston, and enjoyed the personal acquaintance of the most celebrated of the continental chemists; and he has been placed at the head of British analysts, by the venerable Professor of Chemistry in the University of Glasgow. In 1805 he published a memoir on the Bath waters, which attracted much attention, and this was followed by the examination of other mineral waters. The scientific publications of that day contain frequent and valuable papers on the composition of many rare minerals, and critiques on works on chemistry and pharmacy, contributed by him. From the year 1821, he was the conductor of the *Annals of Philosophy*, and when that serial was incorporated with the *London, Edinburgh, and Dublin Philosophical Magazine*, his services were secured as one of the editors of that journal—a post he held till his death. He was successively Lecturer on Chemistry at the London Hospital, at the Government Military College at Sandhurst, at Grainger's School of Medicine in Southwark, and at St. Thomas's Hospital. He also delivered several courses of lectures on chemistry at the London Institution, and lectured occasionally at the Royal Institution, and elsewhere. In 1839, Mr. Phillips was appointed Curator of the Museum of Practical Geology, now in Jermyn Street, which office he held until his death, which event unhappily occurred on the day previously to the opening of that institution by His Royal Highness Prince Albert. In 1822, he was elected a Fellow of the Royal Society, of the Council of which Society he was a Member for some years before his death. He was one of the founders of the Geological Society, and, for the last two years, held the office of President of the Chemical Society of London. In 1824, Mr. Phillips published his first translation of the *Pharmacopœia Londinensis;* and was subsequently consulted by the College of Physicians respecting the *Pharmacopœia* of 1836. Of this latter edition he published a translation, enriched with copious and valuable notes, which work ran through several editions. For the last few years he had been again engaged, in conjunction with a committee of that learned body, in experimenting, under their direction, upon the chemical preparations of the *London Pharmacopœia*, recently issued; and on a translation of this, he was employed a few evenings before his death. To the collection of additional information for this publication, he had devoted much labour and research, which we rejoice to find will not have been expended in vain; as we hear that a portion of the work has already been printed, and that its publication will soon take place. Valued and respected by all who enjoyed the pleasure of knowing him, for the frankness, and the simplicity of his character, as well as for his scientific attainments,

Mr. Phillips has closed a busy and active life, whilst yet both mental and bodily powers were undecayed, to the deep regret of a large circle of scientific friends, many of whom followed his remains to the cemetery at Norwood, where he was interred.

Shillito, Dr. Charles, late of Putney, at York Terrace, Regent's Park, on the 16th May, aged 69. Dr. Shillito became an Army Hospital Mate in 1799; a Member of the College of Surgeons in 1803; and an M.D. of Heidelberg in 1840. He was at one time a Member of the Court of Examiners of the Apothecaries Society.

BOOKS RECEIVED.

Canton (Alfred) on the Teeth. London: 1851. Eyre (Sir James). Practical Remarks on some Exhausting Diseases. London: 1851. Godfrey (Mrs.) on the Spine. London: 1851. Gregory (William, M.D.) Letters to a Candid Inquirer on Animal Magnetism. Green's (Horace) Introductory Lecture. New York: 1850. By same Author. Valedictory Address. New York: 1851. Johnson (Walter) on Hydropathic Statistics. *Pamphlet.* London: 1851. Lyons' Apology for the Microscope. Dublin: 1851. Morgan (Augustus de). Book of Almanacs. London: 1851.

TO CORRESPONDENTS.

Placenta without a Fœtus. We quote the following from a letter, dated March 29th, 1851, received from Mr. Thomas Underhill, Junr., of Tipton, Staffordshire. We do not feel able to give any explanation of the case; and we are also unable to refer to any one resembling it.

"I attended a very singular midwifery case some weeks since. The woman was in the ninth month of pregnancy, and had occasional gushes of hæmorrhage for the last three or four weeks, which led me to suspect placental presentation. When labour commenced, the hæmorrhage continued; and, as the os uteri dilated, I found the placenta occupying nearly the whole extent of the orifice. I punctured the membranes; a large quantity of liquor amnii flowed away, but I could not then ascertain the presenting part of the child. Labour proceeded, and in about two hours the placenta was expelled, with the bag of membranes nearly entire, and containing two large coagula, *but no sign of any fœtus.* I examined carefully the placenta; it was perfect, full-sized, had no funis attached, but merely a knotty prominence in the place where the funis should have been attached. The woman is now quite well. The case is, I believe, without parallel; at least I have never met with a similar one on record."

Medicines by Dry Inhalation. In reply to our correspondent who writes from Croydon, Surrey (as well as in reply to others who have asked for information on the same subject), we have to say, that formulæ for medicinal cigarettes are given by Dorvault, in his work entitled, *L'Officine ou Répertoire Général de Pharmacie Pratique.* The edition now before us—not the latest, we believe—was printed at Paris in 1844. We may afterwards give some extracts from this work.

The Great Exhibition contains numerous objects of much interest to our profession; and to some of them we propose to direct attention.

Communications for the Editors must arrive free of all charge at the Publishers'; or at the Printer's, Mr. Richards, 37, Great Queen Street, Lincoln's-Inn-Fields, London.

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ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON SOME OF THE COMPLICATIONS OF HERNIA; AND ON OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.

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(Concluded from page 447 of May Number, 1851.)

PART SECOND.

OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.

After the able papers upon Internal Intestinal Obstruction, published by Dr. Crisp[1] and Mr. Phillips,[2] and the interesting cases recorded by Dr. G. Bird, Mr. Hilton, and Mr. Druitt, it may seem presumptuous in me again to advert to the subject. As, however, the basis of this paper was written many years ago; as in many points the cases which have come under my care tend to confirm what Mr. Phillips has advanced; and as some points which I shall consider have not been so fully alluded to, either by him or the other authors whom I have quoted, I have determined to submit the following paper to the notice of the profession, in the hope that it will not be found entirely devoid of interest.

The most perfect classification of these maladies, with which I am acquainted, is that of Rokitansky. He has divided internal strangulations into three species:—

1st. The narrowing or complete obliteration of the canal of a piece of intestine, resulting from pressure exerted upon it at one or more spots, by a larger or smaller portion of intestine or its mesentery, so as to compress it against the opposite side of the abdomen.

2nd. The rotatory species; which consists of the rotation of one part round the axis formed by some other part. In this class he in-

[1] Lancet, 1847.

[2] Med. Chir. Trans. vol. xxxi, p. 1..

cludes three sub-species: (*a*) rotation of a portion of intestine round its own axis; (*b*) round an axis formed of mesentery; (*c*) where a portion of intestine forms an axis, round which another large portion with its mesentery turns, so as to touch the periphery of the axis at every point.

3rd. That caused by some peculiar arrangement of parts, the results of original malformation or of previous disease.

These strangulations of the intestines, he observes, occur in circular or fissured spaces formed (*a*) by fibres or bands of cellular membrane running from one organ to another; (*b*) by adhesions of the free end of the vermiform appendix to some part of the walls of the abdomen, or to a portion of intestine or mesentery; (*c*) by adherent diverticula; (*d*) by the adhesion of two convolutions at a single point; (*e*) by perforations in the mesentery, or by fissures in an omentum altered by disease.[1]

It is not, however, my intention to enter into a consideration of all the conditions which may cause internal intestinal obstruction, but to confine my observations to the following points:—

I. Obstruction from contraction of the intestine.

II. Obstruction from membranous bands.

III. Obstruction from the calibre of the intestine being girt round by the omentum or the mesentery, one portion of intestine being twisted upon another.

IV. Obstruction from a combination of the two last-mentioned causes; a twisting of the bowel, and preternatural adhesion by membranous bands.

I purpose to consider the subject under the following heads:—1. The appearances met with on dissection. 2. The Causes. 3. The Symptoms. 4. The Cause of Death. 5. The Prognosis. 6. The Diagnosis. 7. The Treatment.[2]

MORBID APPEARANCES.

I. Contraction of the Coats of the Intestine. Contraction is not an unfrequent morbid condition of serous membranes. It is frequently seen in the pleura, especially where vomicæ, situated near the exterior of the lung, have discharged themselves and cicatrized. It is occasionally seen in the spleen, and very often in the peritoneal coat of the bowels. I have also remarked it in those who have died a few days after the operation for strangulated hernia; in Case XII, the very great contraction observable in the ileum was apparently owing solely to this cause. The following is an abstract of the dissection in that case. The jejunum and upper part of the ileum were enormously distended, partly by yellow liquid fæcal matter, but principally by flatus; a stricture (Fig. 1), formed apparently *by contraction* of the peritoneal coat, without any thickening, existed in the ileum, near its middle: the calibre of the gut in this situation would not admit a large pea. The lower half

[1] Chelius' Surgery, by South, vol. ii, p. 94; and Rokitansky's Pathological Anatomy; translated for the Sydenham Society by Dr. Sieveking, vol. ii, pp. 51-2.

[2] Although, for the facility of description, I have arranged my remarks in the form of a general essay, I am desirous of stating, that the inferences I have drawn have been derived solely from the cases appended to the paper, and those to which I have from time to time alluded; and I wish them to be applied generally *only* in so far as more extended experience shall justify this application.

of this intestine was exceedingly contracted. The convolutions of the intestines were united together by bands of lymph; they were also adherent to the abdominal parietes, and were in many places approaching a sphacelated condition; for, on gently separating the unnatural adhesions, an opening was made into the gut. There was also an unnatural contraction of the muscular fibres in the centre of the transverse colon, but, by pressure, this part could be made as capacious as others. A question arises here,—did this contraction, met with in the ileum, exist at the time the patient was first attacked by peritonitis; or did it occur as a sequel to that affection? I incline, myself, rather to the first supposition, as the bowels were naturally costive, and as there was no thickening of the coats of the intestine, nor any *old* adhesions. I am the more strengthened in this view by a case which I have examined lately; in which a lady, dying at last rather suddenly from fright, after suffering long from phthisis and interlobular emphysema, was found to have the great omentum firmly united to the left side of the parietes of the abdomen; the greater part of the transverse colon was very much contracted throughout its whole length, and the descending colon was contracted precisely in the way in which the ileum was contracted in this case. There was no alteration in the tissue, and no apparent impediment to the passage of the motions; for although she had latterly been of a very costive habit, she had never had any obstinate constipation, and there was nothing like accumulation above the constricted part.

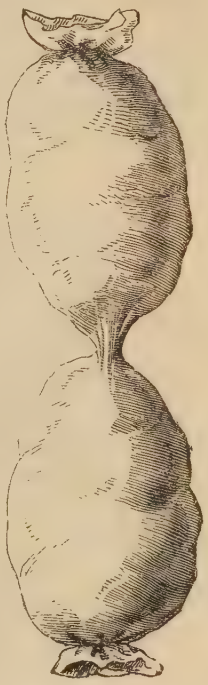

Fig. 1. Stricture of the bowel from contraction of the peritoneal coat.[1]

II. Obstruction from Membranous Bands. Of all the causes of internal obstruction, the formation of false membrane girting some part of the bowel, or preternaturally fixing it to the abdominal parietes, appears the most frequent. This is no doubt the result of inflammation existing some time previously. In Case XIII it will be perceived, that a considerable portion of the ileum towards its lower part, and not far from its termination, was surrounded by two false membranes, one of them of *extreme tenuity*, not much thicker than a thread, and in parts of a *black colour*. (Figs. 2 and 3.) This completely surrounded the gut, and very considerably diminished its area here. In Case XIV also, it is stated, that some of the folds of the ileum were agglutinated together, and tightly bound down to the peritoneum, covering the right iliac fossa, by strong and apparently long-standing membranous bands. In most cases, the adhesions seem to have been of old standing, especially

[1] The wood-cuts which illustrate this paper have been executed by Dr. Westmacott of King's College, from preparations in my possession, with the exception of Fig. 1, which is sketched from memory, and Figs. 2 and 3, taken from drawings by Mr. Hurst, from a preparation in Guy's Hospital Museum, through the kind permission of the Treasurer.

in those appended to this paper, and in Mr. Hilton's case;[1] but in that detailed by Mr. Druitt,[2] the inflammatory action was of more recent origin. It appears also, that *partial* is more likely to produce obstruction than *general* peritonitis; for where all the convolutions are glued together by false bands, although in some a *tendency* to constipation may ensue, in many cases no apparent interruption to the passage through the canal takes place. I remember a remarkable

Fig. 2. Portion of ileum surrounded by membranous bands.

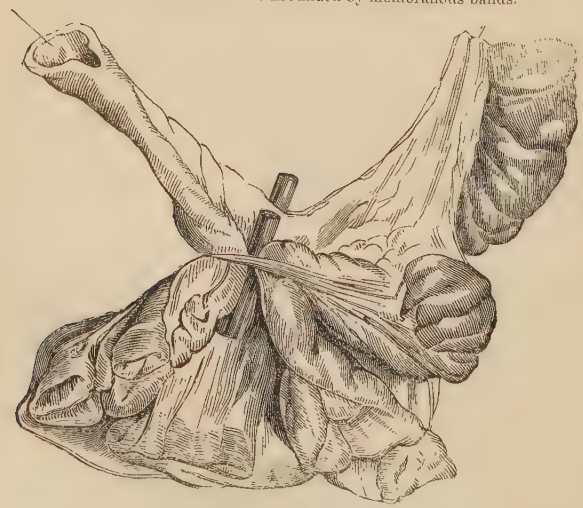

Fig. 3. Opposite view of the same preparation.

[1] Med. Chir. Trans., vol. xxx, p. 51. [2] Ibid., vol. xxxi, p. 245.

instance of this in a strong, healthy-looking old man, who underwent the operation of lithotomy, which proved fatal, and in whom all the convolutions were firmly bound together by strong old adhesions, but in whom no inconvenience had ever been complained of with respect to the bowels; and in Fig. 4, which represents general adhesions of the convolutions to each other, the result of strumous inflammation, leading to tubercular as well as albumino-fibrinous deposit, there was no constipation; and towards the close of life *diarrhœa* supervened.

Fig. 4. All the intestinal convolutions agglutinated together by strumous peritonitis.

The *situation* of these bands is an important point for consideration. In all the cases which I have seen, and in most of those of which I have read, the bands have been around the ileum or jejunum, especially the former; but no doubt they may occur elsewhere. It is natural to suppose that they would be more likely to be attended with urgent symptoms when embracing the small than the larger intestines; and the higher the obstruction, the greater *(cæteris paribus)* would be the distress produced, and the more imminent the danger; but experience does not altogether bear out that view.[1]

III. Mesenteric and Omental Obstruction. It occasionally happens that the bowel is twisted upon itself; and in that case, one portion of intestine is girt round by the mesentery of another, and the confusion of such folding is sometimes very great. No well-marked, uncomplicated case of this kind has occurred to myself: but in Case xv, for which I am indebted to a medical friend, it was found, after death, that a portion of omentum had grown around a knuckle of small intestine (a portion of the ileum), and had occasioned strangulation; so that when the omentum was turned back, the intestine was dragged

[1] Vide Symptoms, p. 604.

back with it; and in the *Medical Gazette*, three very interesting cases, of what he calls dislocation of the sigmoid flexure of the colon, are mentioned by Mr. Mackenzie. In whatever manner, he observes, the displacement is effected, the result is remarkably uniform; the intestine is thrown from its natural situation towards the centre of the abdomen, and receives a twist at its termination in the rectum, which causes complete obstruction of the passage; the small intestines get coiled round it in such a manner as to strangulate the gut by the free margin of the mesentery. In Case I, on opening the abdomen, an enormous viscus, of a dark colour, in a state of extreme distension, occupying the centre of the abdomen, half buried among the small intestines, which were also distended with gas, came into view. This proved to be the sigmoid flexure of the colon; at its termination in the rectum, it was found to have received a twist upon itself, giving rise to complete obstruction. The transverse arch of the colon was pressed towards the right side; all the *intestines were more or less inflamed*, except the rectum and twisted portion; the sigmoid flexure was in a gangrenous state, and on being opened, was found *filled* with cranberries and bloody sanies. In Case II, there were the same morbid appearances as in the former, except that the dislocated intestine occupied the right side, concealing from view the descending colon; and, instead of being twisted, it was tightly embraced by a turn and a half of the mesentery, by the free margin of which it was completely strangulated. A loop of small intestines had got entangled, and was also strangulated and gangrenous; the mesocolon lay in the shape of a long appendix amongst the intestines, quite saturated with extravasated blood. In Case III, the morbid appearances were precisely as in Case II, the sigmoid flexure being thrown to the centre of the abdomen, and at its termination in the rectum, being strangulated by a turn of the mesentery. The small intestines were found in a state of extreme distension, equalling the normal size of the colon, and highly inflamed, whilst the colon was found of normal size; the small intestines were perfectly empty, even of gas, and quite free from inflammation.[1]

IV. Obstruction from the Mesentery and Membranous Bands. It occasionally happens, that both of the causes last-mentioned above, occur in the same individual, and the difficulty and danger of the case are thereby increased. In Case XVI (Fig. 5), such a complication will be seen. The lower part of the ileum, towards its termination in the colon, was in a complete state of strangulation from bands and mesentery; the portion incarcerated consisted of two convolutions united together by bands of lymph, and that portion of the mesentery by which the principal stricture was formed, although very tightly embracing the bowel, was softened, and had *in part given way*.

Effects of Obstruction. Several ill consequences follow as the effects of stricture of the intestine. It may be so tight as to produce, not only congestion of all the tunics of the bowel some way above the constricted part, but softening, ulceration, and perforation,—hypertrophy, and distension of the bowel above the stricture—atrophy and contraction of all the portion below it—and partial or general peritonitis.

[1] Medical Gazette, vol. xli, p. 407.

Congestion of the Bowel above the Stricture. In only two of the cases (XIV and XVI) is there a distinct mention of congestion of the coats of the bowel above the stricture; but it is probable it might have existed in the others in so slight a degree as to escape notice. This appearance will much depend upon the tightness and duration of the obstruction, and the nature of the treatment to which the patient has been subjected.

Fig. 5. Convolutions of the bowel strictured by false membrane and mesentery. A, the part above dilated; B, the band of mesentery forming the stricture.

Softening of the Mucous Membrane will be noticed in some of the cases appended to the paper; in one also, the mucous membrane is said to be ulcerated; but in none of the cases does perforation appear to have happened *before* death. No doubt it may occur from this as it does from other causes, but it is by no means usual; for the inflammation set up around the diseased part produces adhesion to the surrounding textures, and this effectually prevents it. It is more common, therefore, for all the parts to be softened, so as upon the least touch to give way, as happened in Case I, alluded to in the preceding page.

Hypertrophy and Distension of the Bowel above the Stricture. The same evidences of obstruction as are seen in other organs are seen in

Fig. 6. Hypertrophy of the muscular coat of the bowel, to such an extent as to allow of its being torn into two layers.

Fig. 7. Imperforate anus, with rectum distended above it.

the intestinal canal, not, however, to the same extent as in the heart and bladder when obstruction occurs. In the first instance, an effort is made to overcome the obstruction, and by the continuance of that, there is an increase in the muscular power of the bowel, or genuine hypertrophy, as is recorded in Case XVI, illustrated by Figs. 5, A, and 6. Hypertrophy failing to overcome the obstruction, a great augmentation of calibre occurs, which is owing partly to the accumulation of the contents interrupted in their passage, and partly to the decomposition of them, by which much gas is generated. Sometimes the distension is very great, as in Case XII, where the ileum is described as measuring *nine inches* in circumference. I have no preparation of this particular condition; but in Figs. 7 and 9, copies of preparations of imperforate anus, the same thing is very well illustrated.

Contraction and Paleness of the Bowel below the Stricture. There is a great contrast between that portion which is above and that below the stricture; the latter is generally pale, shrivelled, and smaller than natural, especially where the contraction has existed any time. In Case XIV it is stated, that this part was only *one-fourth* the size of that above it

Peritonitis may be general, or confined to some part; the latter appears to be most common, and sometimes it does not take place at all, as in Case XV, where it is mentioned that there was neither fluid nor any other inflammatory product. In most, it will be seen, that the effusion of fibrin was partial, and in only two of the cases was there any fluid found in the abdomen; in Case XVI there were two ounces only of serum; and in Case XIII, eight ounces of dark brown fluid, without lymph, were found in the general cavity. Sometimes, however, the peritonitis goes on to the purulent stage, the matter being occasionally confined in a circumscribed cavity, as in Case I, where it is recorded, that there was a large collection of pus in the right iliac fossa, which was contained in a distinct cyst of false membrane, formed by the agglutination of the lower part of the ileum, the cæcum, and the peritoneum, covering the right transversalis and iliacus internus muscles.

Fig. 8. The rectum of a full-grown fœtus in a natural state.

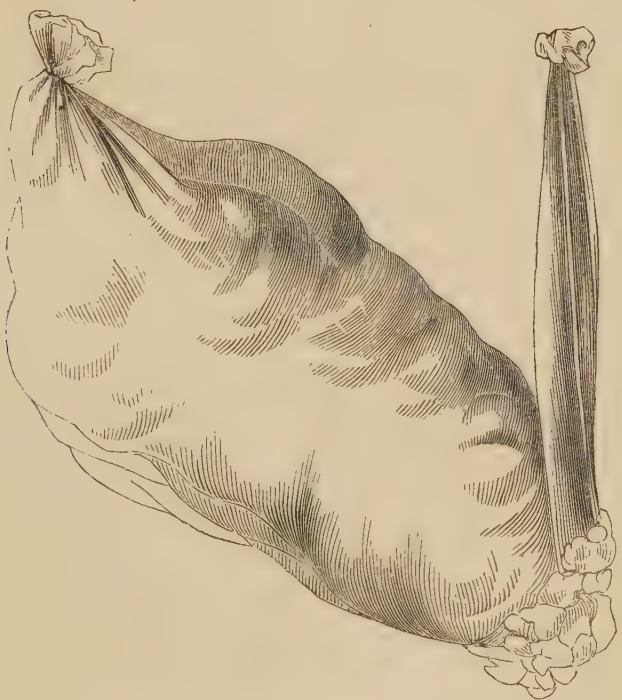

Fig. 9. Another preparation of imperforate anus, with the bladder in front. The distension of the bowel above the stricture is greater than in Fig. 7.

CAUSES.

Although contraction of the bowel and formation of bands, etc., are the *real* cause of obstruction, they are not the *sole cause;* for in many cases there is reason to believe that they had been in existence *some time before* the serious interruption to the canal took place; other causes must therefore exist to bring them into operation, and these are, for the most part, sudden and violent exercise, and errors in the quantity or quality of the food. Thus, in Case XIV, the symptoms showed themselves after lifting a weight; in Case XVI, while the man, a sawyer, was at his work as usual; in another case, soon after exposure to cold when dining out; and in Mr. Mackenzie's cases, the imprudent use of raw, indigestible substances, as cranberries, turnips, cabbages, etc., was suspected as the cause.

Age. Obstruction of the bowel from internal causes may occur at any age; yet in the cases which have come under my notice, and in others to which I have referred, the middle period of life has been that in which it was most frequently seen. Thus, two cases occurred at 20 years of age; one at 34; three at 40; one at 55; and one at 60.

SYMPTOMS.

I shall, in the next place, consider the symptoms to which the morbid conditions described give rise. This is a task both difficult and important; difficult, because it will be seen that they vary considerably in different cases; and important, because, unless the symptoms are clearly made out, the *diagnosis* can hardly be correct; and without a correct diagnosis, anything like operative interference can scarcely be undertaken,—certainly not *early* enough to give it a fair chance of success. In considering this branch of the subject, two things are to be borne in mind: first, the symptoms which show themselves; and, secondly, the *order* in which they appear; the latter, I think, is as important as the former.

A very good summary of the symptoms is given by Mr. B. Cooper, in his valuable lectures, published in the *Medical Gazette;*[1] to which, as they are well known, I shall content myself with alluding. As a closer examination of the symptoms may be attended with advantage, I will enter more into detail. The symptoms may be divided into two classes—the premonitory, and the actual.

Premonitory Symptoms. In some of the cases, nothing particular occurred to call for notice till the time the attack actually began; but in others, *all the life through,* there was a tendency to constipation; and in Dr. G. Bird's and Mr. Hilton's case, the patient, although a youth, seldom got any relief at all without the aid of purgatives. Others had symptoms from time to time of ordinary dyspepsia; others, pains of a colicky nature; and others, again, had had an attack of decided enteritis, which had been actively treated; others had been the subjects of genuine peritonitis; and others, again, had been subject to a complication of abdominal maladies, as in Mr. Hilton's case, where, in addition to habitual constipation, there had been in early life a tendency to, if not actual, mesenteric disease.

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[1] Medical Gazette, vol. xlii, p. 607.

Actual Symptoms. In describing the symptoms which mark internal intestinal obstruction, I will enumerate them in the order in which, I believe, they most frequently occur.

Pain. This varies in kind, degree, and extent, in different cases. In some instances, it is described as a dull, heavy sensation; in some, as in Case xv, there is no pain at all; in others, it is universal; in some it appears to come and go, and is relieved by pressure, after the manner of colic; at others, it is constant and severe, as where the inflammation of the peritoneum is most active. In some instances, there is pain increased on pressure; but in others, that circumstance has not occurred. In some cases, there is a general uneasiness rather than pain; in other cases, the sensation is that of dragging; and in some *(a circumstance specially to be noted)*, there is pain in a situation *away* from the obstructed part; and again, there is pain both there and elsewhere.

Constipation. In almost every case there is constipation: but constipation is very often unattended to, as there is great difference in different persons in respect to the frequency with which the bowels are opened. This has been very well illustrated by Dr. Heberden, who says: "Homines frequentiâ alvum exonerandi plurimum inter se differunt. Alteri semel tantum singulis mensibus venter solutus est; alteri *duodecies* quotidie descendit per *triginta annos*, uti ipse mihi narravit, et dein septies quotidie per septem annos".[1] In these cases, however, the constipation cannot generally be overcome. It is true that by means of injection a small quantity of fæcal matter is brought away, but this is nothing more than sufficient to tinge the injection; now and then a large portion of hardened fæcal matter, which had been long resident in the large intestines, escapes, and then there is no other action; and occasionally, as in Case xii, the bowels have been freely opened, and yet there is a fatal result.

Vomiting has occurred in every case. In the commencement, it is merely the return of matters taken; but as the disease advances, it is said to put on a stercoraceous character. It is generally, however, if not always, the matter resident in the small intestines which passes from the mouth; as, in most of the cases, the obstruction has been in the small intestines, which would as effectually prevent the passage of the contents of the larger bowels *upwards*, as it does the removal of the contents of the upper part of the canal *downwards*. In one remarkable instance (Case xv), the matter vomited was of a very fluid nature, and amounted in a very short time to the extraordinary quantity of *ten pints*.

Abdominal Distension has occurred to a greater or less extent in almost all the cases. In some it sets in early and proceeds rapidly; in others, even when the disease has lasted some time, there is scarcely any distension. Thus, in Mr. Hilton's case, it is stated, so late as the eighth day, "abdomen flat and collapsed".

Hiccup. There is great uncertainty about this symptom; it does not occur in every case, nor, indeed, in the majority; for out of the total number to which reference has been made, it is only mentioned in three of the cases.

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[1] Heberden, Commentarii de Morbis, p. 14.

The Countenance was natural in all of the cases at first, and remained so throughout in some; in one it was florid; in others, however, distress and anxiety were depicted; and in one of Mr. Mackenzie's cases, though the disease was seated in the *large* intestines, the face was reported to be hippocratic and expressive of intense suffering, and here the amount of inflammation was not great.

Pulse. This varies considerably in different cases, and at different periods of the malady. It is generally slow at first, quickens when inflammation sets in, and becomes excessively rapid as irritation advances; in some, it is described as about 68; in others, between 80 and 90; and in others, again, it was as high as 120. In character, also, the pulse varied considerably; in some cases, it was described as natural; in others, as full and wiry; and in others, as exceedingly feeble. These variations have seemed to bear some ratio to the extent of obstruction,—the length of time the disease has lasted,—the amount of inflammation present,—the original constitutional powers of the individual,—and the impression which the disease has made upon the system generally.

Tongue. There has been noticed great variety in the appearance of the tongue. In some cases, it remained clean, even to the last; in others, it was white; in others, brown; in others, red; in others again, it was very dry; and in one case, and one case only, was there noticed an aphthous state of the tongue and mouth.

Skin. In some cases the skin was cool; in others, hot; in some, dry; in others, covered with warm perspiration; in others, the surface was bedewed with a clammy sweat.

Urine. It is worthy of remark, that, in some of the cases, there was a copious secretion of urine, showing that a part of the function which should be carried on by the bowels, was, in a measure, compensated for by the kidneys, when the bowels were no longer capable of acting. In *none* of the cases was an analysis of the urine made, but nothing of an abnormal nature appears to have called for attention. In one case there was *dysuria;* but that arose from a mechanical cause,—a stricture at the bulb of the urethra; and, in one case, there was *retention of urine*, requiring the use of the catheter, but that appears to be referrible to spasm about the neck of the bladder, produced by a blister.

Sleep was procured in most cases, especially in the commencement of the malady; but, towards the close of the case, restlessness, more or less extreme, was manifested. *Delirium* was also observed in one or two cases, towards the close of life; but that was not a symptom observed in the majority of instances.

Dyspnœa is mentioned in one case. It did not arise from any affection of the thoracic viscera, but was owing to abdominal distension thrusting the diaphragm upwards, and thus contracting the area of the chest.

Rigors were also apparent in two or three cases; and, in these, were precursors of inflammatory action about the peritoneum.

The duration of the disease, it will be observed, varied very much. One case was fatal within a few hours, another in three days, another on the fifth day, another on the seventh, and another on the eighth; one on the tenth, one on the fourteenth, and one on the sixteenth day.

CAUSE OF DEATH.

In most instances, the death of the patient is to be referred to exhaustion, consequent on the suffering to which he has been exposed, and the total interruption to the function of the intestinal canal. In some instances, it would appear to be attributable, in great measure, if not entirely, to inflammatory action. In two instances, I think it can scarcely be denied, that death was hastened by the operation performed for the liberation of the stricture; and, in one case, death appeared to be almost instantaneously brought about by the discharge of very large quantities of fluid by vomiting.

PROGNOSIS.

In respect to the prognosis, a few words will suffice, as, so far as we know, all cases are fatal, and therefore the opinion given in regard to them must be very unfavorable. The principal chance of a successful issue seems to depend upon finding out the cause of obstruction, and removing it by operation before the powers of life are too much exhausted.

DIAGNOSIS.

In the earlier stages, it is not easy to say accurately the nature of the affection; but, towards the close of the malady, when it resists all remedies suggested for its removal, there can be little doubt about it.

The maladies most likely to be confounded with internal strangulation, are, colic, enteritis, stricture, malignant disease, and introsusception. In the beginning, it will be perceived, by reference to the cases, that some of them much resembled *colic*. There was pain of intermitting spasmodic character, in some part of the abdomen, not increased on pressure; constipation of the bowels, and absence of fever. As the disease advanced, however, the pain became more violent and more constant; vomiting supervened, at first of the contents of the stomach, but, ultimately, so-called stercoraceous vomiting. The entire failure of all remedial means plainly showed that colic was *not* the disease under which the patient labored. From *enteritis*, it may be distinguished by its comparatively slow progress, by the absence of intense pain and fever, and by the distension of the abdomen not appearing so early as in that disease. As *stricture* occurs most frequently in the lower part of the rectum, examination by the finger will generally enable us to distinguish between the two; and constipation and stercoraceous vomiting are not so often seen in the former as in the latter case. From *malignant* disease, it may be diagnosed by the countenance, by the rapidity of its course, and by the constipation being more persevering than in that disease. From *introsusception*, I know of no symptoms by which it can be *clearly* and *unerringly* distinguished; but as it has not been my lot to see much of this latter affection, and as what I have seen has been principally in children, I cannot, from experience, speak to this point.

Respecting the mode of distinguishing one kind of obstruction from another, great difficulty must, necessarily, be felt. If I may draw any inference from one case (and I am very unwilling to do so), I should say that the free relief of the bowels, the result being nevertheless fatal, would serve to distinguish obstruction, the effect of contraction of

the peritoneal coat of the bowel, from strangulation, resulting either from the twisting of the mesentery, or the formation of false bands. According to Mr. Mackenzie, the following will serve to diagnose dislocation of the sigmoid flexure of the colon: "In these cases, while all the symptoms of strangulation and obstruction of the bowels are present, there is one symptom never absent, which, respect being had to the history of the case, leads to a correct diagnosis, viz.—that it is impossible to throw up injection, per rectum, in any quantity; for, as soon as the gut is filled up as far as the twist, which is always low down, the fluid injected flows out as fast as it is thrown up, independent of any action of the intestine itself. Besides, the introduction of the long tube is impracticable, being always arrested at the obstruction."[1]

Dr. Barlow, in an interesting paper in Guy's Hospital Reports,[2] endeavours to diagnose the *situation* of stricture of the alimentary canal, by the *amount* of the secretion of urine, and cites cases in point. "It seems," he says, "that where there existed a perfect obstruction in the upper part of the small intestines, there was almost a total suppression of urine; where there was a diminution of the calibre of the canal, in the same situation, the urine was diminished in quantity; and where the small intestines were free, and the obstruction was seated in the colon, the urine was very abundant." Should future experience confirm these statements, a very valuable diagnostic mark will be obtained; but in Dr. G. Bird's case, and in some of those which I have related, the obstruction was seated in the ileum, and yet there was no perceptible diminution of urine, so that more facts are wanted to establish this point. At present it seems probable that where the *duodenum* is the intestine affected, non-secretion of urine will be noticed.

TREATMENT.

In the treatment of this dangerous malady, the following indications present themselves:—1, to open the bowels; 2, to subdue inflammatory action; 3, to support the strength; and, 4, to remove the obstruction.

1. *To open the Bowels.* As constipation is one of the most constant, and, at the same time, earliest symptoms, to relieve the bowels is certainly the first indication; and this may be attempted by,—*a*, purgatives; *b*, injections; *c*, the warm bath; *d*, nauseating remedies; and *e*, bleeding.

a. Purgatives. Great judgment is, I think, required in the selection of purgatives, as, if they do not effect their object, they do much mischief; for it is questionable whether the ulceration met with in the mucous membrane, in many cases, may not be in part owing to the unsuccessful use of drastic and violent purgatives. Had I grounds for suspecting that a case was one of intestinal obstruction, from any of the causes mentioned, I would endeavour to liquefy the motions, so that, if possible, they might pass the stricture in a fluid form. For this purpose, I would give one large dose of calomel, to be succeeded every two hours, if the stomach would permit it, by drachm doses of sulphate of magnesia, in peppermint water; and, did these not succeed,

[1] How far this *is* diagnostic I think admits of question.
[2] Vol. ii, New Series, p. 396.

I would rub croton oil on to the abdomen, or try one drop of croton oil internally. Should these fail, I would give up the use of purgatives, feeling assured that the obstruction was much too complete to be overcome by their means.

b. Injections. Purgatives failing to procure action from the bowels, recourse is naturally had to injections, which should, in the first instance, consist of the compound extract of colocynth, dissolved in water; but when a tympanitic state of the bowels occurs, turpentine, or the tincture of assafœtida, is to be preferred. So far, however, as my experience goes in these cases, injections avail but little; and I shall hereafter relate a case where seventy-two injections were administered without any apparent beneficial result.

c. The Warm Bath is a remedy which it would be very proper to use in the earlier stages; but, as the disease advanced, the strength of the patient being much exhausted, would scarcely justify its trial. Fomentations, often useful, and always soothing, should be used in all cases, especially where there is pain.

d. Nauseating remedies, in a strong and robust individual, might deserve a trial. Of these, perhaps, the two best are tartarized antimony, and the tobacco injection; but I should not be very sanguine of obtaining success by their means.

e. Bleeding may be now and then resorted to, in the earlier stages, in the robust and plethoric; but bleeding, carried to any great extent, I consider objectionable, for reasons to be stated hereafter.

2. *To remove inflammation* is a point to which particular attention should be directed; and, perhaps, there is but one thing of more consequence than this, for if it be allowed to go on unchecked, it may destroy the patient; and yet, if too vigorously attacked (by reference to the cases it will be seen that, in some, it was entirely absent, and, in almost all, limited, and by no means severe), the patient may sink from other causes. I think, therefore, that general bleeding will seldom be called for on this account; the application of leeches, fomentations, and the administration of small doses of calomel and opium, will be all that is required for removing or controlling peritonitis brought about by this cause.

3. *To support the strength.* I am very anxious to lay great stress upon this point, because I do not think it has been sufficiently attended to in practice; and I feel sure that patients have been largely bled, who would have had a better chance, had the vital fluid been less unceremoniously abstracted. If the bleeding be not sufficient to effect its object, either in opening the bowels by its depressing effect, or by removing the peritonitis by its antiphlogistic power, it must, if carried to a great extent, do infinite harm, as it will tend to depress the vital powers, already at a low ebb, and thus take away, I may say, every chance, either from the efforts of nature, or the resources of art. In the absence of fever, and where the stomach would allow of it, I would give, from time to time, barley water and chicken broth in small quantities. Where there is great restlessness and want of sleep, and where I had failed in the use of purgatives, and determined no longer to administer them, I would certainly advise the administration of opium, as, by so doing, I should hope to tranquillise the nervous system; for nothing tends to exhaust the frame so much as long-continued nervous irri-

tability; and cases are on record showing the good that has been done with it occasionally. If I employed opiates, I should prefer solid opium to every other form,—first, as being more likely to be retained by the stomach; and secondly, as possessing a stimulating as well as sedative property, which, I think, would, in these cases, be decidedly advantageous.

4. *To remove the obstruction* is one of the most important and difficult questions connected with this subject, and one upon which much difference of opinion exists. It is clear that this can only be done with certainty by means of an operation; and two cases have lately occurred, in which encouragement has been given to this plan. In one of the cases (Mr. Hilton's), the bowel was so far liberated, that the intestinal contents passed through the obstructed part. In neither of the cases, however, did the patient long survive. In considering this subject, four points are to be entertained: A, the likelihood of finding and removing the obstruction; B, the place of performing the operation; C, the time at which it should be undertaken; D, the chance of success that may attend the attempt.

A. *The likelihood of finding and removing the obstruction.* Upon this point, there can be no doubt that there is great uncertainty; for although, in both the cases to which I have alluded, the obstruction *was* detected and removed, yet in one (Mr. Hilton's case) very considerable difficulty was experienced; and in case XVI, had an operation been undertaken, the incision would, in all probability, have been made to the *right* of the umbilicus, as a decided induration was evident there, and not elsewhere, and a pouch immediately above it. It was natural, therefore, to suppose that this was the point of obstruction; whereas, on dissection, this proved to be merely hardened scybala; and the fatal incarceration was situated in the upper and posterior part of the *left* side of the pelvis.

B. *The place of performing the operation.* Mr. Phillips says: "There are some cases where the seat of obstruction is so clearly indicated, that *no doubt* remains. In such cases, I apprehend the rule is evident, —the incision should be made as near as is prudent to that point. But supposing the point of obstruction to be only obscurely marked, or indeed not discoverable at all, then I consider the incision should be made on the median line, because an opening in that situation may be found most convenient for liberation, if that be practicable; or, for the establishment of an artificial anus, supposing liberation of the intestine be not accomplished." The case, however, to which I have just alluded, induces me to think the central incision, as recommended by Dr. Crisp, preferable in all cases where the obstruction is seated in the small intestines.

C. *The time at which an operation should be undertaken.* It is very difficult to lay down any decided rule for this. Mr. Phillips says, that interference by surgical operation is justifiable when three or four days have passed without any relief from the bowels by ordinary means, providing constipation be complete, and fæcal vomiting continue. I scarcely think we are justified in operating so soon; partly because persons have recovered from constipation of twenty-three days' continuance, and partly for reasons which will appear in the sequel.

D. *The chance of success* I regard as a very important consideration

before undertaking any operation; and I cannot think that cases of internal intestinal obstruction, even under favourable circumstances, offer much chance of a successful issue from operation.

In the cases to which I have referred, it has been said, that, had an operation been performed earlier, a different result might have been obtained; and no doubt, in both cases, delay was caused by the unwillingness of parties interested to give their consent. Can that be a matter of wonder, when it is recollected, that if an operation be undertaken, both the patient and surgeon must be prepared to go *all* lengths? The obstruction may *not* be at the part suspected; it may be *some way* from where the operation was commenced, and a *very large abdominal section* may be required to complete the operation; and it may possibly not be completed at all. How can this be undertaken without very considerable risk? How can such an operation be *proposed early?* And how can any better justification be urged for such a proceeding, than that long since advanced by Celsus: "Satius est anceps remedium experiri quàm nullum?"

If it be true, that great difficulty attends the finding these obstructions, and great danger follows the attempt at removing them by the knife, so that we cannot conscientiously recommend it but as a forlorn hope, it is but reasonable to inquire, whether any other expedient can be resorted to for a similar purpose. And this naturally induces me to ask whether nature ever produces a cure, or whether spontaneous relief is ever obtained? Several cases are on record, where persons with the symptoms I have described, and, to all appearance, sinking from internal obstruction, were suddenly relieved in the bowels, and gradually recovered. A case is alluded to by Mr. Cooper where this happened. An elderly lady, residing at Norwich, was under the care of Mr. Colman, suffering from constipation of the bowels, having had no evacuation for four days. The usual purgative remedies were prescribed, but without effect; enemata and more drastic cathartics were tried, but still ineffectually; vomiting and immense distension of the abdomen supervened; the symptoms became more and more urgent, and, on the twelfth day from her attack, she had had no relief from her bowels. Dr. Alderson was then called in, and asked *what purgative* he would recommend; to which he replied—"None; but a large dose of opium". It was given, and *in a few hours* the bowels were freely opened, and the patient recovered.[1] What was the precise condition of this lady must ever be open to doubt; but I venture to suggest that this might have been a case where the bowel was strictured by false membrane, that inflammation and ulceration of this band ensued, and that then the gut was liberated; and I am the more inclined to think so from what is observable in Fig. 5, in which the band seems to be undergoing the ulcerative process; and I feel convinced that, had the patient lived a little longer, it would have entirely given way, and the patient might possibly have recovered. It is this conviction which makes me lay so great stress upon keeping up the strength of the patient; for as newly-formed parts are less organized than those formed originally, there is a hope, if the strength of the constitution be kept up, that the band may give way before the bowel, and the patient's life be saved. It is from this case that I particularly recommend the

[1] Medical Gazette, vol. xlii, p. 608.

renewal of the old plan of metallic mercury; I think its use has not been rightly understood. That it will remove an introsusception, or enable a portion of bowel to be drawn out of these bands, I agree with Mr. Hilton, is not at all likely to happen; but that it might in favourable cases (Mr. Hilton's was not one of that sort), by exciting a pressure upon the bowels, break through a false band, I verily believe; and I am more strengthened in this idea by the good that has occasionally followed its use. I have heard of a case, which I believe was of this kind, where metallic mercury appeared to remove a very obstinate constipation, and the patient recovered; and my friend Mr. Lawrence of Brighton has mentioned to me, and kindly allowed me to make public, the two following instances, which are cases in point. In one, a boy, æt. 10, was seized, without any apparent cause, with constipation of the bowels, but with no sign of inflammation. He was bled, leeched, took drastic purgatives, and had seventy-two glysters administered. On the twenty-first day of the disease, no motion having been procured, ʒiij of metallic mercury were swallowed; no effect following, the same quantity was repeated on the twenty-third day, after which he felt great weight and pain in the abdomen, and voided, with much forcing, an immense quantity of fæcal matter, and all the mercury, minus ʒss; almost fatal syncope followed, but the boy eventually recovered. The other was a case of similar kind, of shorter duration; it occurred in an elderly lady. All purgatives proving unavailing, two doses of metallic mercury, of ʒiv each, were given; several motions (and all the mercury, minus ʒj) followed its exhibition after six hours, but the exhaustion and the depression occasioned were such as to destroy the patient. For these reasons, I think metallic mercury again worthy of a trial; it *can* do no great harm, and *may* do good. That it will often fail, I have not the least doubt, especially where the obstruction is low down, and has been so great as to ulcerate or destroy the coats of the bowel; but where, on the contrary, the band is thin, and high up in the canal, where the constriction is not so great as seriously to engorge or injure the part constricted, where the system does not sympathise much with the local malady, and where the powers of life remain vigorous, I am not without hope that it may *occasionally* succeed; and if *but one case* should occur in which, from what I have said, a trial of this remedy should again be made with success, I shall consider my observations not altogether out of place, and I hope I may with truth be permitted to say—"Est quiddam prodire tenus si non detur ultra".

Case xii. Former Enteritis--Obstruction of the Ileum from Contraction of the Peritoneal Coat—Softening and Ulceration of the Bowel—General Peritonitis—Circumscribed Abscess in the Right Iliac Fossa. J. T., ætat. 40, came under medical care on January 28th, 1832. He had been subject to flatulence and constipation, and had been seized three months previously with obstinate constipation, and with marked symptoms of enteritis; but recovered by bleeding, croton oil, and purgative enemata. When I saw him, he complained of violent pain in the situation of the transverse colon, relieved by pressure; it had existed only a few hours; there was slight tension of the abdomen. He had had three motions on the preceding day, and one that morning; he had no fever. He was ordered to be bled to ʒxvi; to have a drop of croton oil immediately, and 4 grs. of scammony every four hours until the bowels were opened.

Jan. 29th. Blood not sizy: no pain: no fever: no motion. To have a drop of croton oil immediately, and to have it repeated if required.

Jan. 30th. No motion. Two drops of croton oil, and an ounce of castor oil were taken, and injections frequently given. A bougie was passed into the rectum, and met with complete resistance at four inches. The croton oil and enemata were repeated.

Jan. 31st. After great efforts, a very hard portion of fæcal matter passed, as large as an egg, yesterday afternoon, which afforded great relief; three or four loose motions followed. Pain recurred this morning in the transverse colon, and there was great rigidity of the abdominal muscles. Half a drachm of castor oil was given; an opiate liniment was used; and the enemata were repeated.

Feb. 2nd. Leeches had been applied to the abdomen, and several enemata and purgatives administered. No motion until last night. Some urine passed. He is easier, but the abdomen is still tense. A dose of salts and senna was given, and fomentations were applied to the abdomen.

Feb. 3rd. Many foul fæcal stools, with some lumps, and griping; belly less tumid, and softer; pulse natural; tongue clean. He was directed to take a grain of Barbadoes aloes every night.

Feb. 4th. Vomited yesterday afternoon; several motions; abdomen, notwithstanding, hard and full, especially on the right side.

Feb. 5th. Diarrhœa; vomited at times yellow matter, of fæcal smell; belly soft and easy; pulse good; tongue clean, but red. The enemata were repeated; and he was ordered to take twice daily a pill, of a grain of calomel, half a grain of opium, and four grains of compound extract of colocynth.

Feb. 6th. No motion; no vomiting; exceedingly restless; hiccough; pulse very feeble; an aphthous state of the throat. To have a cathartic draught occasionally; the injections to be repeated.

Feb. 8th. Four motions, some figured; abdomen full; aphthæ increased; pulse lower; light-headed; sinking.

Feb. 12th. He died.

Dissection, forty-eight hours after death. The skin covering the abdominal parietes was undergoing putrefaction; the abdomen tense; no air nor fluid in the general cavity. The jejunum and upper part of the ileum were enormously distended (measuring nine inches in circumference), chiefly by wind, but partly by yellow liquid fæcal matter. There was a stricture, formed apparently by contraction of peritoneal coat, without any thickening, in the ileum, near its middle; the calibre of the gut in this situation would not admit a large pea; the lower half of this intestine was exceedingly contracted. The convolutions of the intestines were united together by bands of lymph; they were also adherent to the abdominal parietes, and in many places approaching to sphacelus; for, on gently separating the unnatural adhesions, an opening was made into the gut. There was an unnatural contraction of the muscular fibres in the centre of the transverse colon; but, by pressure, this part could be made as capacious as others. There was a large collection of pus in the right iliac fossa, which was contained in a distinct cyst of false membrane, formed by the agglutination of the lower part of the ileum, the cæcum, and the peritoneum covering the right transversalis and iliacus internus muscles.

Case xiii. Former Peritonitis—Enteritis?—Strangulation of the Ileum by Membranous Bands—No Ulceration—Death on the Sixth Day. I was invited by a medical friend to witness the *post-mortem* examination of a gentleman, æt. 40, who had been attended by Dr. Davis, Mr. Key, and himself. This gentleman, in the year 1830, had been seized with constipation of the bowels, to which succeeded peritonitis. He was largely bled, treated in the usual way, and recovered. For three years he enjoyed very good health, except being occasionally subject to constipation, which easily yielded to aperients. On the 4th September, 1833, he had as usual a natural motion in the morning; but, after eating a mutton chop for dinner, he felt an uneasiness and fulness of the abdomen, for which he took a blue pill, and a mild aperient draught. The uneasiness continuing, leeches were applied to the abdomen, and croton oil and other purgatives administered, together with enemata.

Sept. 5th. No motion having been procured, the uneasiness continuing, and sickness supervening, with tension of the abdomen, the purgatives were continued, and the enemata repeated; the latter returned, only slightly tinged with fæcal matter.

Sept. 6th. After taking a mild aperient draught, he had one scanty motion; felt much less distension; and the vomiting abated. Towards the afternoon, however, the uneasiness increased, the sickness returned, and he had no further motion. The purgatives and enemata were continued; a blister was applied to the abdomen; and an opiate was ordered to be taken at bed-time.

Sept. 7th. There were more distension and uneasiness of the abdomen; the vomiting was stercoraceous; the bowels were still confined.

Sept. 8th. He was much the same, with the exception of retention of urine (probably owing to the blister), requiring the catheter.

Sept. 10th. Hiccough supervened; the stercoraceous vomiting continued; and he died at ten o'clock at night.

Dissection. Decomposition was commencing. About eight ounces of brown serum was found in the abdomen: there was no other evidence of recent peritonitis. The liver, gall-bladder, spleen, and stomach were healthy. A little flatus, and much yellow fæces, occupied the small intestines, the muscular coat of which was in a state of hypertrophy. The hypertrophied appearance increased towards the lower part of the ileum, where, not far from its termination, a considerable knuckle was surrounded by two false membranes, one of them of extreme tenuity, not much thicker than a thread, and in parts of a black colour; this completely surrounded the gut, and very considerably diminished its area. The surrounded portion was of a pale colour, and flaccid; and the mucous membrane, in various parts of the intestine, was soft, pulpy, and of a chocolate colour, but nowhere ulcerated. The large intestines were healthy. The bladder was empty.

Case xiv. Former Peritonitis—Obstruction from some folds of the Ileum being adherent to the Abdominal Parietes—Mucous Membrane softened and ulcerated—Death on the Ninth Day. A man, æt. 34, in lifting a weight, overstrained himself; shortly after which, he felt a pain in the bowels, and, although this continued, he did not for six days apply for medical advice. On the 6th day, he complained of some pain in the abdomen, which was

tense, but not very tender on pressure; his bowels had not been opened since the strain; he had constant vomiting, occasional hiccough, and some dyspnœa; his countenance was florid; his tongue covered with a brown fur; his pulse was regular, full, and wiry; and there was dysuria from stricture about the bulb of the urethra. Twenty ounces of blood were taken from the arm; twenty leeches, and fomentations, were applied to the abdomen; and ten grains of calomel and an effervescing draught were given.

Five hours afterwards, I found him much the same. He had vomited frequently, but the calomel had staid down; there was rather more pain upon pressing the abdomen; he had slept a little, but he had had no motion; the tongue was moister, but the countenance was much shrunk; the pulse was 97, small and thready; there was very great general debility, and the skin was covered with a cold clammy perspiration. Five grains of calomel and one of opium were ordered, together with castor oil and enemata.

7*th day*. Some sleep during the night; less pain, but more tenderness of the abdomen; vomiting and hiccough continue; no motion; in a state of complete collapse. Extract of colocynth, croton oil, port wine, and quinine were given him; the fomentations continued; and a turpentine enema administered.

8*th day*. The matter vomited assumed the fæcal character; there was no motion, although some of the enemata, which had been frequently given, were slightly tinged with fæcal matter. The collapse became more perfect; and he died in the afternoon.

Dissection, sixteen hours after death. The muscles were very rigid: the abdomen was tense: the thoracic viscera were healthy. A great portion of the small intestines were immensely distended with flatus; the vessels of their peritoneal coat, as well as of that lining the abdominal parietes, were much congested: some of the folds of the ileum were agglutinated together, and tightly bound down to the peritoneum covering the right iliac fossa, by strong and apparently long-standing membranous bands. The mucous membrane of the constricted part was in a state of ulceration; and the coats were so completely softened, that they all gave way, upon the convolutions being laid hold of. The folds of small intestine below the constriction, were only one-fourth the calibre of those above. The muscular coat of the bladder was very much thickened, owing to a stricture which existed at the bulbous portion of the urethra.

Case xv. Internal Hernia—Strangulation by Omentum—Vomiting of Ten Pints of Fluid—Death within Three Days of the Seizure. A medical man was called one morning to a gentleman, æt. 58, who was said not to be quite well. He had slept indifferently, and complained of a little sickness, or rather a slight feeling of it; his bowels were somewhat uneasy, and had not been relieved since the previous afternoon. Although the message was not urgent, the surgeon went immediately, and found his patient in bed. He expressed surprise at seeing him so early, and regretted that he had given himself so much trouble for so little cause. His pulse was 68; skin cool; tongue clean; abdomen rather too full, but quite soft; there was no pain upon pressure, but a feeling of soreness. Blue pill and compound rhubarb pill were prescribed for him. At five in the

afternoon he was much the same, having taken at noon a draught with rhubarb and decoction of aloes. The draught was ordered to be repeated every four hours, and the patient was left, without any reason to be anxious about the issue. The following morning, early, the symptoms were not aggravated, except that the abdomen was somewhat larger; there had been no motion, although three doses of rhubarb and decoction of aloes had been taken. A pint and a half of warm water, with some oil, were injected into the bowel; five grains of calomel were put upon the tongue; and, after an interval of two hours, a teaspoonful of castor oil was administered. At 12 at noon, his pulse was not quickened; but his abdomen had become somewhat larger. At 3 p.m. an active enema was administered, without benefit; and a pill composed of calomel and soap was ordered to be given every two hours. At 5 p.m. the pulse had become quicker, and the abdomen larger. At 8 p.m. he was seen by a physician, whose opinion was unfavourable, notwithstanding that there was no evidence of inflammation, and no effusion, and that no hernia was discoverable. He advised that croton oil should be added to the pills, and a turpentine enema administered. At half-past 12 P.M. the patient was quite calm; his intellect quite clear. He was thankful for everything done for him; and stated his belief that there was some alteration of structure, which could not be overcome. About 3 the following morning (the third day), he began to vomit; and, raising himself on his elbow, fluid to the amount of *ten pints* passed from his mouth, as from the spout of a pump, without the least effort; during this, he fell over on his side, and expired.

DISSECTION, TWELVE HOURS AFTER DEATH. Upon turning up the omentum, the cause of death was immediately evident. A portion of omentum had grown round a knuckle of the small intestine (ileum), and occasioned strangulation; so that when the omentum was turned back, the intestines were dragged back with it. It appeared as if this fatty growth had been in progress for some time: it was pervading the intestines generally. They were also very much narrowed in two or three places. There was no fluid in the abdomen, neither were there any evidences of inflammatory action.

CASE XVI. ILEUM STRANGULATED BY FALSE BANDS AND MESENTERY—THE LATTER NEARLY ULCERATED THROUGH—DEATH ON THE NINTH DAY. John Anthony, æt. 21, was admitted a patient of the London Dispensary, under the physician, on May 11, 1833. He was by trade a sawyer. He was of costive habit, and had overstrained himself some years ago. He was at work as usual on the 8th inst., when he suddenly felt a sensation as if his bowels were drawn up in knots: he soon became sick, and had since had no motion. He had been twice bled, with relief, and leeched upon the abdomen; and he had taken calomel, jalap, and scammony.

On the 16th he was transferred to me. The blood taken from the arm was neither cupped nor buffed; he was much exhausted and emaciated; features very much shrunk; abdomen very much distended, and tympanitic. There was something resembling a pouch to the right of the umbilicus, and below this an induration, which was very tender when touched. Pressure upon any part of the abdomen gave pain, but more especially in the before-mentioned part, and in the course of the

descending colon. With the exception of two days, vomiting had been constant from the commencement of his illness: this morning a large quantity of very offensive stercoraceous matter was brought up. He lay with his legs drawn towards the abdomen, being easiest in that position; no rigors; no sleep; tongue brownish, and like raw meat in the centre; pulse soft, 108; skin perspiring; rectum, upon examination, healthy and empty. He was ordered to have a common enema immediately, and two grains of calomel and a quarter of a grain of opium, and a drachm of Epsom salts in peppermint water every two hours; and to have a turpentine injection in the evening.

May 17th. The injections soon returned, only slightly tinged with fæcal matter; the vomiting continued urgent; the matter rejected was yellow, and seemed to come from the small intestines; the abdomen became more distended. He became delirious, and died at eleven in the morning.

Dissection. There were about two ounces of serous fluid, but no air, in the general cavity of the abdomen. The small intestines were excessively distended, partly by yellow inodorous fluid, and partly by flatus. The coats of the small intestines were hypertrophied; the lower part of the ileum, towards its termination in the colon, was in a complete state of strangulation, both from bands and mesentery. The portion incarcerated consisted of two convolutions, united together by bands of lymph, in a state of great engorgement; the mucous membrane appeared softened, and on the eve of bursting; and the portion of mesentery by which the principal stricture was formed, although very tightly embracing the bowel, was also softened, and had in part given way. The portion strangulated was lying in the upper and posterior part of the left side of the pelvis; the cæcum had been somewhat dragged from its situation. The liver was healthy; the gall-bladder distended with green bile; the right kidney was healthy, but its ureter was dilated to the size of a goose-quill. The thorax and head were not examined.

CONCLUSIONS.

I. The ileum is that part of the intestinal canal where internal obstruction is most likely to occur.

II. Membranous bands (probably the result of former peritonitis) are the most frequent cause of obstruction.

III. Partial is more likely than general peritonitis to lead to obstruction.

IV. All the convolutions of the intestines may be united together without obstruction.

V. Mechanical, although the direct, is not the sole cause of obstruction, as there is reason to suppose the mechanical cause has been in existence some time before the symptoms show themselves; other causes must therefore arise to produce them, and the most frequent of these are sudden and violent exercise, and errors in the quantity or quality of food.

VI. It is *possible* for a spontaneous cure to arise from inflammation and ulceration of an obstructing band.

VII. The same consequences are seen in internal intestinal obstruction as are seen in other obstructed canals—viz. hypertrophy and dilatation above the stricture; atrophy and contraction below it.

VIII. The symptoms vary considerably in different cases.

IX. The order in which the symptoms arise is as important as the symptoms themselves.

X. There are no symptoms by which one obstructing cause can be clearly distinguished from another.

XI. The duration of the disease varies much in different cases.

XII. The strength of the patient should be maintained.

XIII. Bleeding should be employed with great caution.

XIV. The seat of obstruction may be very apparent, and yet deceptive.

XV. An operation is only justifiable as a forlorn hope.

XVI. As a rule, when an operation is resorted to, the central incision is to be preferred.

XVII. There is reason to believe that metallic mercury has proved useful; and it is in obstruction from membranous bands chiefly, if not solely, that benefit is to be expected from its use.

Camden Row, Camberwell, April 1851.

OBSERVATIONS ON THE FORM AND MOVEMENT OF THE CHEST IN PHTHISIS.

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AN absence of symmetry both in the form and movement of the thorax is very apt to be considered as a necessary condition to the diagnosis of Consumption; and I have seen many cases of phthisis overlooked, in consequence of a well-formed and, to all appearance, healthy chest, having been deemed incompatible, not only with the existence of pulmonary tubercles, but even with the tuberculous diathesis. It is the object of the following observations to correct this misapprehension; and I shall commence with a few remarks upon the relation of the form of the chest to the *development* of consumption.

The form of the thorax appears to have little or nothing to do, primarily, with this disease, for it is equally common to see phthisis attacking persons of fine and well-proportioned chests, as those who are the subjects of some congenital or acquired thoracic malformation. The life-guardsman, the pugilist, the blacksmith, etc., notwithstanding the fully-developed chests which their several occupations induce, are, *cæteris paribus*, quite as liable to the inroads of phthisis, as the mechanic or artizan, whose daily task leads to the opposite result; the truth being that, in every instance, the origin of the disease is not attributable to any peculiar conformation of chest, but to the various circumstances under which such conformation has arisen; the impure atmosphere which has been breathed; the excesses which have been indulged in; the violation of sanitary laws; or, the inherited scrofulous taint. It is very questionable whether even the evil practice of wearing stays has been justly accused of bringing on phthisis in the female sex. M. Louis considers the popular belief upon this subject

as nothing more than matter of assertion, wholly unsupported by proof; and the very circumstance of consumption being so much more prevalent in London amongst males than females,[1] might be fairly used as an argument against it. Without doubt, this habit, which fashion has so mistakenly inflicted upon women, has its penalties; but phthisis can scarcely be included in the list.

The varieties of deformed chests, which are sometimes congenital, but oftener, perhaps, acquired during infancy in consequence of imperfect nutrition, are much less frequently seen amongst consumptive patients than might be anticipated. In phthisical children they are very common, but not so in adults; which probably arises from the circumstance, that whenever the deformity proceeds from the early development of scrofula, the little patients' career is very liable to be cut short by some form of tuberculous disease; but when it arises from causes which are only temporary, the health may be restored as these are overcome; and although the form of the chest may ever afterwards retain the evidence of early derangement, it does not expose its possessor, on that account, to any unusual chance of becoming phthisical. Whether or not this may be a satisfactory explanation, the fact remains, that the pigeon-breasted chest is not of very frequent occurrence amongst phthisical adults, whilst it is common enough to observe persons so affected in the enjoyment of perfect health.

The deformity arising from angular curvature of the spine is extremely rare, and has only once fallen under my observation amongst more than two thousand consumptive patients; and this is the more singular, from the affection being, in nearly every case, of scrofulous origin. Lateral curvature, on the contrary, is very common, and the loss of symmetrical form and motion of the thoracic walls which it generally involves, is liable to be mistaken for an indication of pulmonary disease, if the condition of the spine should escape notice; but this deformity has no relation to the development of phthisis, beyond that of exhibiting a defective state in the general health, which may have induced the tuberculous diathesis.

Continued observations upon phthisis in all its multiform characters, have led me to the following conclusion:—that the best formed chests afford no security against the onset of the disease, whilst those which are comparatively ill-developed, or even deformed, do not appear, on that account, more liable to become the seat of tubercle.

I now pass on to some remarks upon the form of the thorax as influenced by phthisis in its commencement and progress; and these will be better understood by a brief reference to the relationship existing between phthisis and tubercle.

There is a period of the disease, sometimes well-marked, but equally often so short and ill-defined that it escapes detection, which may be termed the *preliminary* stage; it might be called with more propriety the *first* stage, but this title has been too long applied to a somewhat later period to admit of being changed. Consumption has now commenced. The tuberculous elements exist in the blood, but are not yet separated from it in the form of tubercle. This period passes into the tubercular or *first* stage; in some cases the tubercle is formed very

[1] First Medical Report of Brompton Hospital for Consumption, p. 8. London: 1849.

rapidly; but in others, it may take months, or even years, for its accumulation to any notable amount.

The tubercular deposit consequently should be considered as the *effect* of phthisis, and as bearing precisely the same relation to this disease as the lithate of soda does to gout; and, just as a patient may be gouty without having the movements of his joints affected by "chalk-stones", so may any one be phthisical without having the functions of the lungs interfered with by tubercle. The really phthisical symptoms, at the commencement of the disease, depend, not upon the state of the lungs, but upon the morbid condition which has produced it. It is true, that in the latter stages, much of the patient's suffering is a direct consequence of the pulmonary disease; but, at an earlier period, the general features of the malady—the weak and quickened pulse—the languid expression—the perspirations, etc.—depend entirely upon the *phthisis*, not upon the tubercle.

From this view of the subject it must follow, that phthisical symptoms may present themselves in connexion with every possible degree of pulmonary disease,—from a few scattered tubercles, which are scarcely appreciable, to their accumulation in considerable masses; and that *incipient* phthisis is not *always* discoverable by a physical examination of the chest. If this had been more fully admitted by writers upon these subjects, the stethoscope would have been often spared unmerited discredit.

We will assume, however, that the disease has fairly reached its *first* stage, and that the tubercular deposit is sufficiently abundant to interfere with the proper functions of the lung. In what manner is this exhibited by physical signs? Are the form and movements of the chest necessarily altered? These are questions which cannot be answered by an appeal to individual cases, on account of the well-known Protean character assumed by the disease, and are only to be met by continued observation upon such a scale as an hospital, like that at Brompton, can alone afford.

As a general rule, the form of the chest is unchanged, and the action of its two sides is symmetrical. In a few instances, there is a slight bulging over the diseased part, but, owing either to its rarity, or the shortness of its duration, it is not very often to be detected. Auscultation and percussion are now the sole guides to the condition of the lungs—points, however, upon which it is not my present object to enter.

I have always been aware that such a statement may be met by the very plausible argument, that directly the apex of a lung becomes tubercular, it must necessarily lose some of its capability of being expanded, and, as a natural consequence, the portion of the thoracic walls corresponding with the seat of the disease, must undergo a change in form, and be less moveable than the opposite side. But I think it can be shown how it happens that, in most cases, neither of these alterations are immediately apparent, and that the chest may retain, for a time at least, its healthy form, as well as its long-accustomed habit of equal and simultaneous motion.

There are two ways by which it does so, viz.: 1. The movement of the healthy side becomes diminished to the same extent as the other, so that the ordinary breathing, instead of being partly costal, as we find it in health, is almost wholly abdominal. 2. The pulmonary cells

in the immediate neighbourhood of the tubercular deposit become enlarged, and by increased capacity for air, compensate for those which are disabled.

The first is less common than the other, but its occurrence may be witnessed in certain cases (of which I have seen many examples), where, although it is evident from other signs that one lung only is affected with tubercle, the thoracic movement upon both sides is small but equal, except on very deep inspiration, when the diseased side is less raised than the other. The second may be seen in the many cases of early phthisis, in which the respiratory sound upon the diseased side is actually louder than on the other, and in the still more numerous instances, in which the murmur at the tuberculous apex is scarcely audible in some points, and morbidly loud in others; both of which conditions must be familiar to every experienced auscultator. It is probable that the first takes place in cases where *miliary* tubercle is scattered throughout the greater part of the lung's apex; and the second, where the tubercular deposit is in somewhat larger masses, and accumulated in particular spots.

The occasional bulging over the diseased part, first observed by Dr. Chambers, is yet additional testimony in favour of the second explanation; for when the portion of the chest so altered is percussed, it is often found to be more resonant than the healthy side, apparently in consequence of an extreme degree of enlargement of the pulmonary cells, amounting to emphysema.

But, after a time, which varies very much in different cases, circumstances are entirely changed; the diseased portion of lung *begins to contract,* and the thorax undergoes an alteration in form, not only in the region of the clavicles, but in its whole contour. M. Fournet referred this contraction to secondary pleurisy; Dr. Stokes has attributed it to atrophy of the lung; and Dr. Walshe has added to these, the contraction of plastic matter exuded into the pulmonary tissues. It is probable that these different causes are sometimes associated; but one or more of them must be present, before the form and action of the chest can be materially interfered with.

In the majority of phthisical cases, their effects begin to appear towards the middle or latter end of the first stage; but examples are sufficiently numerous of their being completely absent until softening has commenced.

I shall describe the several changes which are thus produced, as they are seen when in their extreme; premising, that the greatest variety will be met with, both in the rapidity and extent of their development.

The vertebræ of the neck and back are inclined forwards, and the shoulders are rounded; the front of the chest is consequently contracted, and the stature of the body lessened, giving an awkwardness to the whole appearance, difficult to describe, but which any one accustomed to the external aspect of the disease, would at once refer to the *tubercular chest.* If the patient be looked down upon whilst he is sitting, two curves are distinctly visible; the one affecting the whole line of the cervical and dorsal vertebræ, the other crossing it, and formed by the two shoulders inclining forwards. A depression is visible beneath one or both clavicles, giving to these bones the appearance of

prominence; and, posteriorly, the supra-scapular region over the diseased part is more or less sunken inwards. During ordinary breathing, either there is no costal movement whatever at the upper part of the chest, or there is a difference in its extent upon the two sides; and, on forced respiration, instead of the peculiar *swelling* movement of the infra-clavicular regions which is so characteristic of health, either one side is elevated more than the other, or the entire chest is raised, as it were, in one mass, without being perceptibly increased in the antero-posterior diameter of its upper part. These latter changes are more conspicuous in females than in males, as the healthy respiration in our own sex is principally abdominal, whilst in females—owing to the restriction of stays, or for reasons which the obstetrician is the best able to appreciate, there is greater freedom of movement in the upper ribs, and the breathing is, to a much greater extent, costal.

The loss of symmetry and healthy movement take place simultaneously; so that, unless there is some depression in the clavicular or supra-scapular regions, there will be no diminution in the ordinary movements of these parts. M. Fournet was, I believe, the first who drew attention to this circumstance; and I have certainly never seen an exception to it.

The changes above described may occur at any period of phthisis, from that antecedent to softening, to that of large vomicæ; but they are very capricious guides to the actual stage of the disease; for persons with cavities in the lungs very often are less altered, in these respects, than others who have scarcely entered the second stage. The different amount of pulmonary contraction which must accompany different cases, will at once account for these varieties.

From the preceding observations, I think it must be evident that inspection and mensuration of the chest can seldom afford assistance in the diagnosis of *incipient* phthisis; although, as the disease advances, they may prove useful auxiliaries to other physical signs. But when it is remembered that a departure from strict symmetry is occasionally seen in healthy persons, as a consequence either of a congenital peculiarity, or of certain pursuits which influence the development of the thorax, it is obvious that much caution is always necessary in their employment.

I shall conclude with the following extract from M. Fournet's *Clinical Researches on Phthisis:*

"Il arrive assez souvent qu'une infiltration tuberculeuse *considérable* a lieu dans un poumon sans qu'aucune diminution dans le volume du thorax, aucune modification dans les mouvements de la paroi thoracique correspondante, se fasse remarquer. C'est le cas ordinaire de la tuberculisation *miliare disséminée*, et de la phthisie aigue. Dans ce cas, les mouvements de la paroi thoracique ne sont pas sensiblement modifiés. . . . . On voit, que la palpation des mouvements de locomotion n'est applicable qu'à une époque déjà fort avancée, de la première période de la phthisie, époque à laquelle le diagnostic ne peut plus être douteux, si l'on s'est servi convenablement de l'auscultation et de la percussion."

4, Bolton Street, Piccadilly, May 30th, 1851.

ON THE CAUSES, CONSEQUENCES, AND TREATMENT OF INFLAMMATION OF THE VEINS.

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(Concluded from p. 503 of last Number.)

The term Phlebitis, originally restricted to designate inflammation of one of the larger veins of the body, has gradually been extended so as to include all the consequences which are liable to result from it; and the idea promulgated by M. Cruveilhier, that all such secondary affections have their origin in inflammation of the capillary veins of parts at a distance from the original lesion, has been the means of gradually associating the term rather with the grave constitutional affections arising from a poisoned state of the blood, than with any local disease.

In my last paper, I considered some of the effects likely to arise in different capillary systems from the stimulating nature of their contents, and from the mechanical impediment to the circulation produced by the admixture of foreign substances. At present, I shall in like manner review some of the results produced by the presence in the blood of substances which have a tendency to alter its condition, either by producing its coagulation, or by causing its separation into its different parts.

III. Since the time of Ambroise Paré, different surgeons have, with greater or less accuracy, described the abscesses which form in the lungs and liver after injuries to other parts. These abscesses were observed to be peculiar, in the sudden and unexpected manner in which they make their appearance, and also in the circumstance of several of them forming at the same time, leaving the intervening structure of the organ in its natural condition. The want of knowledge of the real way in which they originate, was veiled by ascribing their formation to "sympathetic action", "metastasis", "constitutional irritation", etc, But as such words have been used without any distinct meaning, their place might, perhaps, be advantageously supplied by the term "translation", employed to indicate that the *materies morbi* is transferred from one part of the body to another, in the manner and under the circumstances which have been already pointed out.

John Hunter was the first, in modern times, to study the actual conditions under which abscesses formed in veins.[1] His observations proved that the internal coats of veins, like the internal surfaces of serous cavities, might become the seat of inflammation, and that such inflammation might terminate in suppuration. "From attentive examination of abscesses of the lungs, he found many appearances which served to confirm this supposition. He often observed the internal surface of veins leading from such abscesses, not only in an inflamed state, but, in many places, suppurated; and he could even distinctly trace the progress and termination both of the inflammation and suppuration."

[1] Medical and Philosophical Commentaries by a Society in Edinburgh, vol. iii.

It is not a little remarkable, that Hunter, having so closely traced the progress of inflammation of the larger veins in the extremities, and also of the smaller veins in the lungs, should have failed to recognise the relation which these so frequently have to each other. Almost all pathologists who have written upon inflammation of the veins, have, in fact, taken for granted, that the injurious consequences produced were necessarily transmitted by continuity of surface. It was therefore natural enough, that the investigation of the effects of inflammation of the veins should terminate with the appearances of irritation of their lining membrane; and as these could rarely be traced in the direction of the circulation so far as the heart, and never beyond it, the consideration of the disease naturally terminated at this point.

In the dissections which Hunter made, he usually found the abscesses which had formed in the course of the veins accurately circumscribed, being separated from the fluid blood by firm coagula. He, however, showed, in a preparation still preserved in the College of Surgeons, that the coagulum might be absent upon one side, and then, he conceived, the purulent secretion might become mixed with the blood. What the circumstances were which determined the formation of coagula in one case, and not in another, Mr. Hunter did not attempt to define; but the following case which he has left on record, leaves no doubt with regard to his having duly appreciated the important office which they perform.

Case xlii. A man was taken into St. George's Hospital with an inflammation of the arm, in consequence of having been bled in the basilic vein. He died suddenly at the expiration of eight days. Upon examination, the vein was found inflamed; the inflammation extended from the puncture which had been made by the lancet as high as the axilla; it went also some way down below the puncture. The orifice where the lancet had been introduced was yet open, and a probe could easily be made to pass through it. The coats of the vein were much thickened, and even the coats of the artery were affected in consequence of its vicinity to the diseased part. About the middle of the arm the vein had suppurated, and was divided by the abscess into two. Each extremity, like the internal surface of the abscess, was irregular and jagged. From the cavity of the abscess *there was a free passage into the axillary vein.* The cause of the patient's death was attributed to some accidental change in the position of the arm, by which the purulent matter was mixed with the refluent blood, and immediately carried to the heart.

In the dissection of horses which had died after bleeding, Mr. Hunter had traced the inflammation to the heart. To this he attributed the death; thereby giving origin to the notion, since so generally received, that the fatal symptoms arose from the extension of inflammation in a continuous and uninterrupted manner along the lining membrane of the vessels. In dissenting from this opinion, which has been followed by the very great majority of subsequent writers, it is necessary to remark, that in some of the most rapidly fatal instances, the inflammation has not extended far along the veins; and Mr. Arnott has, by a very careful collection of cases, clearly shown that it by no means generally extends to the heart.

It appears to us a most important fact in connexion with the patho-

logy of this disease, that wherever a coagulum is found to have occupied a vein for any length of time, there the coats of the vessel will be found thickened; but that, on the contrary, no change will be found to have taken place where the circulation has remained unobstructed.

In examining the veins of those who die of phlebitis, it is not at all uncommon to see such portions of them as have been blocked up with coagula, thickened by adhesive inflammation, while intermediate portions (which have contained no coagula, or where these have been only recently formed) remain in their natural condition. Specimens illustrating this point may be seen among Dr. R. Lee's preparations in the museum of St. George's Hospital; and the evidence which they afford is not the less satisfactory from the dissections having been made to confirm other and different opinions.

It must be evident, in such cases, that it is the stagnation of the vitiated blood in contact with the lining membrane of the vein, which produces the inflammation; and we submit, that it matters not at what intervals such stagnation may take place. The essential characters of the disease are the same, whether the poisoned blood coagulates through the whole of a vein, or in its different parts; whether in the vessel in which the vitiated secretion is first formed, or in some distant system of capillaries. It is, in fact, the poisoned condition of the blood, and not the extension of the inflammation to any particular part, which gives rise to the severe constitutional symptoms. The inflammation which is set up in internal organs, after bleeding, thus appears to have the same essential characters as that which affects the vein originally wounded. The disease is merely translated from one part of the venous system to another; and we have thus no difficulty in accounting for the multiform character of the secondary affections, of which, otherwise, it would be difficult to offer any rational explanation.

It is important, in the elucidation of the symptoms of this disease, that we distinguish between the coagula formed in veins by vitiated and by healthy blood. The former will irritate and inflame the coats of the veins; while the latter forms the most efficient barrier against the extension of the inflammation. In examining the veins of those who have died of phlebitis, it will sometimes happen that the lining membrane will appear "blood stained". This may occur either with or without any thickening of the coats of the vessel. It is not difficult to account for this appearance when a coagulum has remained in contact with the discoloured membrane; but it is occasionally observed where no coagulum is found upon dissection. It is extremely probable, in such cases, that the appearance is still due to a coagulum of blood having for some time occupied the vessel, and having subsequently been removed, either by the natural force of the circulation, or by accidental causes.

The following case from the Hunterian MSS. (Cases and Dissections) may illustrate this point:

Case xliii. Mr. —— received a blow on the right side of the face, which stunned him, but from the immediate effects of which he soon recovered. He was bled; but the opening in the arm opened, and he bled again. An inflammation came on in the arm, which was very severe; and a suppuration at the orifice took place. He was taken with stupor, sleepiness, and sickness at the stomach. It was,

at the time, doubted whether these symptoms depended upon the blow he had received, or upon the inflammation of the arm. He continued in much the same state until the twelfth day, when he was seized with a most violent shivering fit. He became as cold as possible, subsequently hot, and then covered by a profuse perspiration. He remained all day very low and debilitated, and his arm had less of the fluid red colour than previously. On the fifteenth day he became, in some degree, comatose, lost the power of speech, and died a day or two afterwards.

The preparation of the veins taken from this case, and preserved in the College, shows the cephalic distended through nearly its whole course by a firm clot. This, at the upper part, becomes smaller, and tapers to a narrow flat band, which adheres firmly, by one of its surfaces, to the adjacent wall of the vein. The walls of the vein at this and at the lower part appear healthy; but, in the intermediate portion, they are thick and tough. The median-cephalic and median-basilic veins, and the lower part of the basilic vein, are similarly filled with firm round clots. *The upper part of the basilic vein is pervious; but its inner coat is discoloured, being blood-stained.* An attentive examination of this preparation will, I believe, leave little doubt that the discoloration must have been produced by the contact of a coagulum, which, for a certain time, occupied the cavity of the vessel; and it is not improbable that the period of its dissolution, and its removal into the circulation, was marked by the grave accession of constitutional symptoms, which manifested themselves on the twelfth day. The intensity of the local and constitutional symptoms may not unfrequently bear an inverse proportion to each other. In the case just mentioned, the inflammation of the arm became less apparent at the very time that the really serious symptoms first appeared; and, on the other hand, the following case will show that the constitution may remain comparatively unaffected, even in the severest cases of local phlebitis.

Case xliv. Thomas Baker, a powerful man, of irregular and intemperate habits, was bled in the left arm, on the 28th of March 1851, having, a few hours previously, been thrown from a horse. He had been stunned at the time of the accident, had broken his collar-bone of the right side, and sustained other injuries about the head and chest. On the 7th of April, the wound made in bleeding, shewed a disposition to suppurate; a pad was, at this time, placed upon the vein, above the wound, and retained in position by a moderately tight bandage. The inflammation about the orifice now subsided, the wound healed, and no further attention was, for the time, paid to it. Ten days after this, the bandage from his arm having been removed, he got upon horseback. As the right arm was still disabled, from the fracture of the collar-bone, he was obliged to use the arm in which he had been bled freely. On returning home, he complained that his ride had "shaken" him.

On the evening of the 19th, a sharp pricking and smarting sensation was experienced about the upper and inner part of the arm. He felt uncomfortably warm, and, of his own accord, loosened the bandages that were about his shoulders. On the 22nd, a vivid red patch of inflammation, the size of the palm of the hand, had formed upon the upper and inner part of the arm. This was of a bright red colour,

becoming white for a moment upon pressure. Its outline was, in some parts, tolerably well defined; but, in others, it faded gradually into the colour of the surrounding parts. The inflamed part was very hot to the touch, and exquisitely painful upon pressure. The pulse was quick and full, but not hard; the skin hot, but not dry; the tongue coated with a yellowish brown fur, which was not unusual with him; and the bowels had been freely opened by medicine. The cicatrix of the wound made in bleeding, appeared perfectly well healed, and showed no signs of irritation. A pad was carefully adjusted, so as to make slight pressure over the upper part of the basilic vein; its lower border corresponded with the termination of the redness in the arm. He was ordered bark, with some *liquor ammoniæ acetatis*.

During the two following days, the inflammation extended downwards, in the course of the vessels, and indicated some disposition to spread to the back of the arm. He now continued the bark alone. On the 25th, the redness had extended below the elbow; several large vesicles had formed upon the arm, principally in the direction of the basilic vein; the cicatrix at the bend of the elbow discharged some dark coloured matter,—its edges were tumid and everted; the whole of the inflamed parts were exquisitely sensitive; pulse 108, compressible; he had some comfortable sleep. From this period, the inflammation gradually spread, involving the whole of the arm; the skin lost its bright red character, and became more livid, and abscesses formed slowly in succession, in every part. The inflammation, which spread so extensively in other directions, never encroached upon the situation of the pad, which had been placed over the upper part of the basilic vein. At the time when the inflammation was most intense, the patient became delirious for three or four nights; but this probably depended upon his having been denied his usual quantity of stimulus. With this exception, there occurred no symptoms to indicate that any vitiated fluid had entered the circulation. In this case no shivering occurred, either at its commencement, or at any other period; thus affording a strong contrast to the case last mentioned.

The extent to which the blood may coagulate in the living body, in similar cases, is remarkable. When the whole diameter of a vein is obstructed at any one point, a mechanical impediment is necessarily afforded to the circulation in the smaller veins which supply it. The blood, then, is placed under circumstances favourable to its coagulation in them also; and the same disposition is induced in them as in the larger vessels. The obstruction thus produced in veins will account for the tendency evinced, in some cases, for the inflammation to spread in a direction contrary to the natural course of the circulation; whereas, if no such obstruction exists, it will follow the course of the blood. It is evident that, under these circumstances, it may become an important object in the treatment to place a limb under those conditions which may favour the formation of a coagulum in the affected vein. The local inflammation may, by this means, be increased; but the constitutional affection is prevented. However severe the local symptoms may be, if there be fibrine enough in the blood to form a coagulum, and seal the vessel, the patient is comparatively safe. This observation applies with even greater force to cases of open or divided veins; such as present themselves after childbirth,

on the inner surface of the uterus; or, after amputation, on the suppurating surfaces of stumps.

IV. The difference between the effects produced by the introduction of foreign substances into the blood, when they are retained in the first system of capillaries to which they are conveyed, and those which result when they are allowed to circulate with the blood, is strikingly illustrated by the following experiments.

Experiment xxix. Fifteen grains of crystallized acetate of lead, dissolved without decomposition in rain water, were injected (a third part at a time) into the crural artery of a large dog. Each injection caused very great pain. The limb, after the operation, became completely paralytic, relaxed, and cold. The pulse and respiration were frequent, and there was a good deal of thirst. In the evening, the limb had swollen, but did not in the least recover its heat, its sensibility, nor its motion. The pain continued unabated. The animal died twelve hours after the experiment.

Post-mortem Appearances. All the organs in the interior of the body were healthy; but the limb was much swollen, emphysematous, and infiltrated with reddish serum. The muscles had become of a pulpy consistence, and of a reddish-black colour. The lighter structures had assumed a violet colour; and the whole limb had the appearance of having been affected with gangrenous inflammation.

Experiment xxx. Four grains of tartar emetic, dissolved in an ounce of water, were injected into the crural artery of a large dog. Some pain was apparently experienced during this operation; and the animal subsequently walked a little lame upon the affected leg. From the time of the operation, all food was refused; and violent retching and vomiting came on at the expiration of a quarter of an hour. Much discomfort and restlessness were now apparent. The pulse was small and feverish; but the limb, when handled, in no wise appeared preternaturally sensible (affording in this respect a strong contrast with the limb in the experiment last mentioned). An hour and a quarter after the operation, a kind of diarrhœa came on, accompanied by a repetition of the vomiting. These symptoms recurred occasionally until about three hours after the injection of the fluid, when the animal died.

Post-mortem Appearances. The limb upon which the experiment had been performed presented nothing unusual. The peritoneum was slightly injected, and contained some reddish serum. The stomach also was slightly injected, but only at its pyloric extremity. The mucous membrane of the duodenum throughout was livid, of the colour of the lees of red wine. This appearance was continued into the jejunum; but the other portions of the alimentary canal were apparently healthy. The liver was congested, and mottled upon its convex surface. In some situations its structure was so altered in consistence, as to break down upon very slight pressure. The gall-bladder was healthy, and full of bile, which was neither thick nor dark coloured. The lungs were studded here and there with a considerable number of petechial spots, or small black patches.

Direct experiment, in these instances, affords us the same information which we obtain from the more lengthened observation of cases as they occur in practice; viz. that foreign substances, when introduced

into the blood, in some cases being retained in the part, expend their influence in producing a local, although perhaps a most severe, disease; while in other instances, circulating more freely with the blood, they leave no trace of their entrance into the system, but produce a strictly constitutional affection.

The diseases which we have now to consider, belong principally to the last-mentioned class. It must, however, be remembered, that the two sets of symptoms continually present themselves, in every shade of intensity, in the same case; and that infected blood, which at one period of the disease goes the round of the circulation, may at another be arrested in some system of capillaries, and give rise to an apparently local disease.

Experiment xxxi. An ounce of fluid, resulting from the fermentation of some leaves of beet-root, in about an equal quantity of water, was injected into the jugular vein of a very little dog. At the expiration of an hour, the animal vomited. This was followed by evacuations of the bowels, at first of moderate consistence, but subsequently liquid, and consisting chiefly of mucus. Symptoms of dysentery now made their appearance. There was pain in the stomach upon pressure, difficulty of breathing, and expression of much uneasiness. Three hours after the injection, there were complete prostration of strength, inability to walk, or even to stand; and fresh evacuations of gelatinous mucus, tinged with blood. These symptoms were followed by renewed vomiting of glairy bilious fluid, and discharge of urine. The fluid evacuations from the bowels were now repeated upwards of five times, and were very fetid, tinged with blood, and black as if mixed with soot. Under the persistence of these symptoms, the strength became greatly impaired. The animal was affected with convulsive twitchings of the muscles, and died eleven hours after the injection.

Post-mortem Appearances. The body was opened while yet warm. The lungs were found somewhat dark and congested, but free from inflammation or petechiæ. The intestinal canal, from the pylorus to the anus, was covered with a muco-sanguineous fluid, resembling the lees of red wine. The mucous membrane of the intestine was, however, everywhere healthy, except in the duodenum, the commencement of the jejunum, and the rectum. In these situations it was of a violet red colour, and bore marks of having been inflamed in longitudinal ridges.

Experiment xxxii. Some beef and blood were allowed to decompose in water, at a temperature of about 80 Fahr. Five ounces of this fluid, which was quite putrid, were injected in divided quantities into the peritoneal cavity of a small dog. After the experiment, there was prostration of strength, vomiting, discharge of fæces with tenesmus, and increased sensibility of the stomach. At the expiration of an hour, the vomiting and evacuations, consisting of gelatinous mucus, recurred several times. The animal died nine hours after the operation.

Post-mortem Appearances. About a pint and a half of bloody serum was found in the peritoneal cavity. This was without smell, and of the colour of the lees of wine. The peritoneum was inflamed, of a violet red colour, and presented everywhere patches of ecchymosis or congestion. The inflammation appeared to have been very great, and was accompanied by the formation of dark patches along the course of

the vessels contained in the mesentery. The discolorations were also found at the attached margin of the intestine. The whole of the mucous membrane of the intestinal canal, from the stomach to the anus, was highly inflamed, and of a deep red, violet, or black colour. The folds of mucous membrane which projected into the cavity of the intestine were most discoloured; and in the stomach, these were the only parts inflamed. A glutinous but not bloody mucus was contained in the intestines. The muscular layer appeared in no way to have participated in the affection. The bladder was empty and contracted; it was inflamed on its peritoneal surface, but of its natural appearance within. The left pleura contained some bloody serum. The spleen and the lungs were studded with patches of congestion.

Experiment xxxiii. The last experiment was repeated on a large dog. Two ounces and a half of fluid, obtained from putrid beef, not so thick or fetid as in the preceding case, were thrown into the peritoneal cavity. Very great pain was immediately produced. This was followed by prostration of strength, aversion to food, fever without vomiting, alvine evacuations, and death at the end of ten hours.

Post-mortem Appearances. About two pints of bloody serum were found in the peritoneal cavity. The peritoneum itself was excessively inflamed, of a violet red colour, studded with black patches, and presenting here and there inflammatory adhesions and exudations. The bladder was of a deep red colour externally, but quite of its natural appearance within. The intestines were inflamed on their peritoneal surface, but still more so internally. The mucous membrane, from the pylorus to the anus, was thickened, of the colour of the lees of wine, and coated with mucus. Even those portions of the intestines which (in consequence of having been protected from the contact of the morbid fluid) were not inflamed on their serous surface, were nevertheless affected internally.

The general result of the presence of putrid fluids in the system, whether introduced directly into the circulation, or by absorption from serous surfaces, is, as evinced in the foregoing cases, to produce a remarkable affection, peculiarly characterised by congestion of the mucous membrane of the intestines. The evacuations that accompany this condition, are evidently an effort of nature to relieve the system from the vitiated fluids which have entered the circulation; and it is not a little remarkable, that the mucous membrane of the intestines should in these cases be exclusively affected. The appearances produced may be distinguished from the results of inflammation, in that no thickening or shrinking of the tissues is produced; but they are swollen, congested, and blood-stained, either in petechial spots, in larger patches, or over a continuous surface. The discharge from the intestines, in such cases, consists chiefly of mucus; but this may sometimes be accompanied by a kind of passive hæmorrhage, and occasionally the secretion may assume a puriform character, without any abrasion of the mucous lining of the canal.

We can readily understand, under these circumstances, that the appearances and symptoms which, a few years ago, were so often observed and described as forming a separate disease, under the name of gastro-enteritis, may frequently have been only the secondary results produced by an unhealthy condition of the blood.

When the actions produced by the introduction of putrid fluids into the body are fully developed, all the indications of putrefaction may take place even in the living body. Not only the fluids, but the so-called solids, pass rapidly into decomposition; and the former would appear, in addition to being extremely liable to decompose themselves, to have the property, under certain circumstances, of infecting other parts, and even other healthy bodies. Thus, we read, that during the plague of Marseilles, the bile taken from those who had died of the disease, uniformly produced death when injected into the veins of dogs.

After a putrid element has been introduced into the system, the blood is evidently altered in composition. It becomes black, viscid, and, in a great measure, deprived of its fibrine. After death, it is found fluid, of a very dark colour, and not unfrequently mixed with gas.

It might be, and, perhaps, generally is supposed, that putrid fluids mixed with the blood have the power of preventing its coagulation. The experiments which I have performed on this subject have, however, led me to an opposite conclusion. I have found that the addition of putrid fluids to healthy blood recently drawn promotes its coagulation. It is nevertheless true, that whenever there is manifested a tendency in the body to decomposition, the blood will be found to have lost its power of coagulation; but this effect arises from the continued circulation of vitiated fluid with the blood, and is not the immediate result of their admixture. It is probable, in this as in the former classes of cases, that the foreign substance gradually abstracts the fibrine of the blood, giving rise to small petechial spots, or small patches of congestion in different parts; and whatever may be the coagulating power of the blood when the putrid element is first introduced, it rapidly becomes impaired, or altogether lost.

Of all the substances with which the experiments have been tried, none possesses the power of coagulating blood so rapidly and so completely as pus. To this fact we attribute the formation of the larger patches of congestion found in internal organs when pus has accidentally entered the circulation; and with the more feeble influence of putrid fluids, or of mercury, we naturally associate the formation of the smaller and more circumscribed congestions, where these have given origin to the disease.

Two principal indications arise from the physiological analysis of these affections. *First*, in phlebitis, strictly so called, there may be, and generally is, a twofold disease, namely, a local inflammation, and a constitutional infection. These, although they occur together, give rise to very different symptoms, and may require very different plans of treatment. It may even be strictly in accordance with the soundest principles of pathology, to use remedies to subdue the violence of the local inflammation, at the same time that tonics are administered to support the general strength of the system. *Secondly*, we learn, by direct experiment, that where a putrid element is introduced into the circulation, the mucous membrane of the intestines and the liver are the principal channels by means of which the elimination of the morbid matter is attempted. The functions of the intestines would appear to fit them in a peculiar manner for this office; and it is probably some power connected with their natural action which determines so large a

flow of vitiated blood to their mucous lining. The congestions which arise in other parts, in consequence of a direct infection of the blood, may terminate in the effusion of serum, lymph, pus, or blood, either separately or mixed together in various proportions. In some rare instances, the secondary inflammation may terminate in resolution; of this the following case affords an instructive example.

Case xlv.[1] G. B., æt. 31, was admitted into St. George's Hospital for an aneurism in the left groin, for which the external iliac artery was tied. On the evening after the operation, the whole abdomen became painful and tender; the pulse was frequent, the skin hot, and the tongue dry and brown. The patient was bled, and on the following day the bleeding was repeated. The adhesions of the edges of the wound were destroyed, and gave exit to some sanious matter contained within. On the third day, none of the local symptoms were relieved, and the constitutional symptoms were much aggravated. The right shoulder now became affected with intense pain, accompanied by swelling and tenderness. Half a pint of wine was prescribed to be taken daily, with such nourishment as the stomach could receive. The pain in the shoulder, with some degree of swelling, continued for some time; but on the quantity of the stimulus being farther increased, this, as well as the other symptoms, gradually subsided.

This case is interesting, not only as showing that a secondary inflammation may terminate in resolution, but also as indicating the kind of constitution in which such secondary affections are likely to occur. Three months after the patient was discharged from the hospital as cured, the pulsation returned in the tumour, which again enlarged to a very considerable size. It is therefore evident that the coagulating power of his blood had from some cause been greatly impaired: for had this not been the case, the coagula which had been allowed such ample time to form, would have permanently closed the dilated vessel.

13, Dover Street, Piccadilly, June 1851.

HYSTERICAL AFFECTIONS OF THE HIP JOINT.

By WILLIAM COULSON, Esq., F.R.S.C.Eng., Surgeon to St. Mary's Hospital; and to the Magdalen Hospital, etc.

I was consulted in the case of a young lady, nineteen years of age, pale and delicate looking, of highly nervous and excitable temperament, on account of an affection of the right hip joint, for which she had been under surgical treatment, and for a considerable time confined to the recumbent position. The frequent application of leeches, and the employment of counter-irritation in every possible form, had proved without avail; she lay helpless and bed-ridden, complaining of severe pain extending over the whole lower extremity, and impressed with a firm conviction that she would remain a cripple for life. She shrunk from the slightest attempt to examine the limb, declaring that the pain she experienced was insupportable. My attention, however, was

[1] Related by Sir Benjamin C. Brodie in the *Medical Gazette*.

directed to the fact, that her general health had not suffered to an extent corresponding with what might have been anticipated from the severity of the local suffering, and the duration of her illness and confinement. The head of the femur was evidently in the acetabulum; there were no evidences of thickening or of disorganisation of the structures composing the joints; the pain was diffused, and her exaggerated complaints seemed as much excited when the integuments were lightly touched, as when firm pressure was made over the bones. No persuasions of mine could induce this patient to leave her bed, or to use the limb. I ordered her different preparations of steel, quinine, and other suitable remedies, but there was no perceptible change for the better. She was lying in this helpless state, when intimation was sent her that her father had been suddenly taken ill, and was not expected to live. She was conveyed in an invalid carriage to a distant part of the country, where the family resided, and arrived in time to see her father expire. By this loss, the means of living became much reduced; the family, which was large, could no longer pretend to their former state of affluence, and the different members were called upon, for the first time, to exert themselves to meet their calamity. This young lady upon being made acquainted with the particulars—for misfortune it was none to her—one day suddenly rose from her couch and walked. She exerted herself much, both mentally and bodily, for the good of those around her, seemed to forget her long illness, and has ever since remained well. That the joint was not affected with any organic change is clear from the result of the case. The disease was one of those obscure hysterical affections, more common among the rich than the poor, during which the impression of pain is in a morbidly excited and perverted state, and the power of the will over a certain group of muscles is suspended.

A limb was removed by a surgeon from a patient, whose symptoms, in many respects, corresponded with those in the case I have above related. The girl was in humble life, but well brought up, and was much noticed by some ladies who superintended the school where she was educated. She was of pale complexion, with dark hair and eyes, and of highly excitable temperament. Without apparent cause, severe pain came on in the right knee; the leg became flexed upon the thigh, and the slightest effort at extension excited impressions of intense suffering. She became an interesting object of pity; numerous professional opinions were asked by her patronesses, and frequent visits were paid to her by different surgeons. All, however, urged the necessity of her leaving her bed and using the limb; a measure to which she professed herself unequal. At the expiration of three years, during which her condition varied but slightly, a surgeon was induced, upon her representations, to recommend the amputation of the limb. To this she assented; the operation was performed, and the wound healed without any unfavourable symptom. Upon examination, the joint was found to be perfectly healthy. The synovial membrane retained its normal delicacy and transparency; the articular cartilage was slightly thinned, as is usually the case in a limb which has been long disused; the bones were light and easily sawn, but otherwise healthy; and there were no morbid changes in any of the surrounding structures.

It has been calculated, that at least four-fifths of the females among

the higher classes of society, supposed to be suffering from diseases of joints, are, in truth, affected with hysteria, and with nothing else. As, in the one case, absolute rest is requisite to effect a cure; and in the other, the patient must be urged, nay, even forced to take exercise, in spite of complaints of pain, it is important that the surgeon should be familiar with everything that will assist him to form an early and accurate diagnosis.

In hysterical affections of the hip joint, the patient from the first complains of pain in the part, and not in the knee, as is frequently the case when organic changes are commencing in the joint itself. The pain which the patient describes as most severe is not limited to one spot, but extends over the buttock to the lumbar region, and down the thigh. It is this general diffusion of pain which constitutes one of our most useful distinctions between this affection and disease of the hip joint. From the commencement, the patient complains of such aggravation of pain by pressure and motion, that she confines herself to one position of the limb; and yet upon occasions, when the mind is otherwise occupied, or during sleep, she will move it without complaint. The sensibility of the limb to the touch is frequently so great, that the slightest pressure on any part of the hip or thigh will cause the patient to scream; she shrinks involuntarily from the mere approach of the hand, but nevertheless, upon a careful examination, these morbid conditions will be found to exist more in the skin than in the deep-seated parts. As Sir Benjamin Brodie, who first directed attention to these important affections, observes: "If you pinch the skin, lifting it at the same time off the subjacent parts, the patient complains more than when you forcibly squeeze the head of the thigh bone into the socket of the acetabulum."[1] The more the patient's attention is directed to the part, the more the pain is increased; but if her attention be directed otherwise, she will hardly complain, and the pain does not interfere with her rest. In disease involving the structures of the joint, there is nothing of which the patient complains so much as the inability to sleep at night. Just as "Nature's soft nurse" comes to soothe the suffering and exhausted frame, a sudden start, or pain, or cramp, banishes sleep, and the patient dreads again to close her eyes. In hysterical affections, on the contrary, the sleep is calm and refreshing; and this, perhaps, is a great reason why the general health so slightly suffers, even in long-protracted cases. The pain is anomalous in its character, and different from the result of inflammation, or other organic changes. It may not be always easy to arrive at the truth, for such is the morbid constitution of the mind, that when leading questions have on a previous occasion been put, the patient will, as it were, take the hint, and symptoms, for which we previously may have in vain inquired into, will now actually present themselves. As for the motives for such deception, "to become an interesting object", says Dr. Prout,[2] "is an innate and characteristic feeling of the human mind; and if in early life this feeling in its natural and legitimate form has been thwarted or disappointed, it is almost sure to deviate into some other channel; and the ruling passion is displayed in attempt-

[1] Brodie, Sir B. C. Lectures on Local Nervous Diseases, p. 88.
[2] Prout, Dr. Diseases of the Stomach and Urinary Organs, p. 385.

ing to excite pity and commiseration, when she cannot excite erotic sentiment."

In some instances, there is no visible alteration about the joint or neighbouring parts of the limb; in others, there is general puffiness and tumefaction of the whole hip. The swelling, however, is rarely considerable, and depends on the effusion of fluid into the surrounding areolar tissue. It corresponds with what may be observed in some other neuralgic cases; thus Sir Benjamin Brodie relates a case of facial tic douloureux, attended with severe pain and swelling of the face, although there could be no doubt that the seat of the disease was not in the nerves, but in the brain itself. I have seen similar cases. In one, severe paroxysms of pain, attended with considerable œdema over those parts of the face supplied by the first and second divisions of the fifth, was the result of some obscure disease of the brain, in a man otherwise healthy, of temperate habits, and of powerful frame. When the tumefaction is limited to the immediate neighbourhood of the hip joint, it increases the difficulty of distinguishing this affection from organic disease, more especially as, in some forms of scrofula, the muscular excitement of a subacute character, dependent possibly upon irritation caused by the deposit of tubercle, spreads to the neighbouring parts, producing an undefined fulness and puffiness. In these cases, however, the swelling eventually is more defined, and proceeds from the formation of matter within the joint; in hysteria, the interior of the joint is quite sound.

I have often witnessed the periodical change of temperature mentioned by Sir Benjamin Brodie (*Op. cit.* p. 284), affecting either the joint, or even the whole limb. In the morning it is cold, pale, and shrunk; towards evening there is evidence of a more active circulation, and the surface of the skin is evidently red, hot, and shining. During the night, the heat and redness subside; and these alternations are as regular as the paroxysms of an ague. A patient who was some time under my care, was extremely susceptible of changes of temperature in the part; the knee, the part affected, was usually colder than the opposite joint; but towards evening it became warm, and quite damp with perspiration.

In all these cases, there is a great tendency to muscular contraction, and the limb is thrown into that position which it would assume after the influence of the will is removed, as in sleep. The thigh is bent upon the pelvis, the leg is bent upon the thigh; and, unless means be taken from the commencement to counteract this deformity, it gives the surgeon more trouble than the original complaint. The muscles undergo a sort of atrophy, and become paler than natural; the tendons contract cellular adhesions with parts around, so that very considerable and continued force may be requisite to free the limb, and to bring it to its proper bearings. I have known it necessary for the surgeon to perform the operation of the subcutaneous division of tendons, in the case of a contracted limb in an hysterical girl. Both the outer and the inner ham-string tendons were divided, when the leg was readily extended, and the patient recovered the use of the limb. The muscles about the hip, arising from the pelvis, do in some cases contract in such a manner, as to prevent the patient putting the heel to the ground on a level with that of the sound leg; and at times the limb is even so

much drawn out of its natural position, as to simulate dislocation of the femur upon the ilium.

A young lady, the subject of hysterical hip disease, came under my care, the case having previously been mistaken for disease of the joint, and moxæ applied. The knee was bent; the limb inverted; the thigh rested upon its fellow, and the head of the bone was preternaturally prominent. A superficial observer might have easily mistaken it for dislocation. The most positive assurance on my part could scarcely remove the impression which existed in the minds of the parents that there was no organic disease in the joint, and that there was no necessity to pursue the plan of counter-irritation and confinement. My patient was first directed to take out-door exercise in a carriage; with much trouble the limb was at length straightened; then she was persuaded to attempt to walk; and by these means she ultimately recovered.

Sir Charles Bell relates a case of this kind; and similar cases are not uncommon, in which "the knee was bent almost to the bursting of the ligaments, and the foot turned in so extraordinary a manner that the great toe lay close to the anus."

The age most liable to this affection is from fifteen to twenty; but when once developed, it may continue for a long period. I have met with cases in which the catamenia were irregular or scanty; but in other instances they have not deviated from health. The bowels are sometimes, but by no means invariably, constipated.

I will now sum up the symptoms by which this affection is distinguished from disease of the hip joint. In *the nervous affection*, pain is felt, from the commencement, in the hip, and extends to the loins and down the thigh; there is great general nervous excitability, and extreme sensitiveness in the part; and the patient is from the first unable to walk. Combined with this extreme amount of expressed suffering, the trochanter major retains its proper bearing to the spine of the ileum. There is not the characteristic wasting of the glutei muscles, and consequently no flattened appearance of the nates. Pressure in these situations, where the bone approaches almost the surface, does not excite greater pain than in the other parts. There are none of those involuntary startings during sleep, which cause the patient such intense agony. On the contrary, however loud may be the complaints of the painful condition of the limb while the patient is awake, no sooner is she asleep, than she rests well and calmly throughout the night. In *true hip disease*, the reverse is the case; for, when nature is exhausted by suffering, and the patient faint from want of rest, the sleep, if unaided by the administration of opium, is broken by sudden cramps, shooting pains, and frightful dreams, or vague anticipations of coming pain.

There is one circumstance attending this affection of the joint, which is calculated to mislead the inexperienced practitioner. I allude to its being often described as consecutive to a blow or other injury. In fact, many surgeons believe that there is generally some such cause, which determines the manifestations of these nervous phenomena in any one particular joint. I cannot say that I share largely in this view. Were local injuries alone the exciting cause, the pain would

be equally felt in such constitutions, in whatever joint were the seat of the accident; whereas, it is well known that, in by far the greater number of cases, the neuralgia is in the hip or knee.

As regards the pathology of these affections, we know little. The joint, the seat of pain, offers no abnormal deviations. It may, however, be asked, is not this affection seated in the spinal cord, or in the brain? Can we explain the phenomena of pain and muscular contraction, upon the supposition that the spinal cord, to which all motor and sensitive nerves are attached, is in a morbidly excited state, and that the brain responds truly to the impressions which it receives? Or is it that the functions of the brain are all perverted; and that an inquiry must be conducted upon the same principle as if we were seeking to investigate the reason why, as in the insane, objects are seen which do not exist, and sounds are heard which were never uttered? From the wonderfully sudden change which a strong mental impression can effect in one who is the subject of an hysterical affection of a joint, I am inclined to believe that it is to the sensorium we must mainly look as the organ morbidly affected; although I am fully aware that, in many instances, there are evident proofs of a highly sensitive and excited condition of the cord.

A young lady, nineteen years of age, complained of a constant gnawing pain in the knee joint; of stiffness and weakness, from which she feared a sudden fall. Her parents wished the joint to be strapped and bandaged; but feeling convinced that the disease was of a nervous character, this plan was not adopted. At the time of each menstrual period, the pain was more severe; and when seated at work, or engaged in reading, she was subject to a violent convulsion, without increase of pain, and incontrollable by the will, affecting the muscles of the whole body. It was a strongly marked instance of reflex action; the convulsion being so strong, that she would rise from her seat and forcibly grasp whatever object she was holding. The same phenomena would occur, if, at these periods, she was suddenly exposed to any risk of receiving a blow on the affected knee; the movement then being equally general and involuntary. There was, however, no increased pain; the sensation which the brain appreciated remaining unchanged, however violent the spasm of the leg.

"The existence," says Dr. Conolly, "of an original susceptibility in excess, in the nervous system of hysterical patients, is an assumption warranted, we conceive, by all observation. The natural or congenital constitution of the nervous system, and even of different portions of it, is most plainly discerned to be different in different individuals. From the very cradle may be observed a different degree of sensibility to impressions; and even a different countenance, impressed by the hand of nature herself, before human feelings have written their deeper lines upon it." "In the hysterical patient, we may observe the most intense development of susceptibility, connected with a singular proneness to irregular action, often arising from slight causes; the natural proportion designed to exist between the impressions of the external world, and the sensient human system, being in them not preserved."[1]

[1] Conolly, Dr. J. Cyclopædia of Practical Medicine, Art., Hysteria: vol. ii, p. 576.

With regard to the treatment of this affection, it is obvious that, if it be mistaken for organic disease of the hip joint, the surgeon will be led to adopt a line of practice, not merely useless, but positively injurious. The seat of the disease being in the nervous centre, little can be done locally, with any benefit or relief to the patient. We are, therefore, called upon to direct our remedies to the state of the nervous system generally. The patient must be persuaded to leave her couch as soon as possible. It is useless to wait until the painful sensations have subsided. She must take carriage exercise daily, be in the open air as much as possible, and in the society of lively and cheerful companions of her own age. The diet should be plain and nutritious. In the common forms of hysteria, I find the vegetable tonics more efficacious than the metallic; but, in that now under consideration, they possess no superiority. Their employment, however, is by no means to be laid aside; for in all cases where the tongue is foul, and there are other evident signs of derangement of the digestive organs, they are more beneficial than any preparations of the metals. But under different circumstances, as when the appetite is tolerably good, the tongue clean, and the bowels regular, then it is that the metallic tonics may be tried with great effect. In most neuralgic affections, the preparations of iron prove successful; and among these the carbonate stands justly preeminent. It may be prescribed in as large a dose as the stomach will bear without inconvenience. Among the medicines that directly soothe the pain, none are preferable to valerian; for though much less powerful than opium and belladonna, it neither constipates the bowels, nor enfeebles the system.

"The medicine which I have found the most useful," says Dr. Copland, "is the spirits of turpentine, prescribed in various modes, internally and externally, and administered in enemata; the preparations of iodine, alone, or with narcotics and camphor. These, however, should be associated with suitable adjuvants; amongst which, the several narcotics and antispasmodics are the most important. The warm or vapour bath, simple or variously medicated; mental excitement, and exercise taken regularly and energetically, and employment of the mind, are also important aids in the treatment. The affections of the joints are sometimes accompanied, or even alternated, with severe nervous pains in the extremities, and occasionally with tenderness in some portion of the spine. In such cases the treatment hardly requires any material alteration. In those which have come under my care, I have very frequently prescribed the spirit of turpentine, as already stated, and often repeatedly in enemata; and after two or three doses of it, I have commenced with the preparations of iodine, conjoined with henbane, opium, or belladonna. Whilst the iodine has been given, the turpentine has been administered in enemata, from time to time; and embrocations or liniments assiduously employed."

When the pain has been extreme and almost insufferable, the local abstraction of blood by leeches has afforded relief; but it has been only temporary: and, as the effect of the loss of blood necessarily is to weaken the frame, their application cannot be often repeated without producing permanent mischief.

Counter-irritants, such as blisters, setons, stimulating liniments,

mustard-poultices, and the like, all aggravate instead of relieving the pain. The belladonna or opium plaster, and sedative liniments, are the only local applications which I employ.

It may, however, be fairly questioned to what extent medical treatment in these cases is productive of good, unless there exists some evident derangement, against which our remedies may be directed. Far more is to be effected by moral treatment. Those absurd fancies to which young women of the present day are peculiarly susceptible, and which prevent their giving way to the vivacity and buoyancy of spirits suited to their age, should be carefully checked. The mind should be trained to regain its elasticity, instead of brooding over melancholy forebodings, or seeking to excite sympathy and compassion. The patient (cruel as it may seem) should not be allowed the privileges of a sick-room; nor should she be permitted to recline upon the sofa during the day, an interesting object of solicitude to her friends, and of care to a medical attendant. By being compelled to move the limb, and enter into society, patients have been known to recover, after the complaint had resisted every other kind of treatment.

The time of cure varies. Sometimes it is instantaneous; at other times it is slow. The time, however, does arrive, when this morbid state of the nervous system passes away, and the patient begins, though somewhat late in the day, to feel grateful to those to whose judgment and perseverance she owes her recovery. Above all, let it be remembered, that in this affection, the power of motion is present from the beginning; but the will to exercise it lies dormant, until called into action by some sudden emergency, or excited by moral and remedial means.

REMARKS ON THE NATURE AND TREATMENT OF HAY-FEVER.

By F. W. MACKENZIE, M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

It is well known that the respiratory mucous membrane is in some persons peculiarly susceptible to certain impressions, and readily disposed to take on morbid action in consequence. The perfume of particular flowers in one,—the effluvia from ipecacuanha in another,—the emanations from hay and grass in a third,—the smell of certain animals in a fourth,—and the presence of minute quantities of dust in the atmosphere in a fifth,—will give rise to much irritation of this membrane, and in some cases to severe consecutive constitutional disorder. In what this peculiar susceptibility consists, we neither know, nor shall probably ever discover; but the fact itself is undeniable, and in a practical point of view is one of extreme interest.

In the different instances which have been mentioned, it is probable that a similar state of the mucous membrane is induced in each; and that although the causes may differ, their ultimate action is the same; that this is primarily upon the nervous system, or those parts of it which are more immediately connected with the respiratory mucous

membrane; and that nervous irritation precedes and gives rise to those alterations in the secreting functions of the membrane, together with the other local and constitutional derangements by which the disease when fully developed is characterised.

It would thus appear probable that, however the symptoms, as well as the exciting causes, may differ in different cases, these affections depend upon the same proximate cause, and are amenable to the same general principles of treatment. It is more particularly, however, to the derangement of the mucous membrane produced by the effluvia from hay and grass, that the following remarks are intended to apply.

In designating this disorder, various terms have been used, having reference chiefly to the cause or to the nature of the local or the constitutional derangement. Hay-asthma, hay-fever, hay-catarrh, summer-cold, summer-catarrh—are terms ordinarily in use; but they express very imperfectly the nature of the disorder, and are otherwise not altogether free from objection. The local as well as constitutional symptoms will vary materially in different persons, according to the localisation of the irritation in the mucous membrane, its severity, and the susceptibility of the patient: thus, the portion of membrane lining the frontal sinuses, that of the eyes and eye-lids, the Schneiderian membrane, the mucous membrane of the throat, or that of the trachea and bronchi, may be principally or solely affected in different persons, and accordingly the symptoms will approximate in different cases to those of cephalalgia, ophthalmia, coryza, cynanche, bronchitis, or asthma.

With regard to the pathology and treatment of the affection, it may be remarked, that very little is known; and many persons annually suffer severely from it, who have failed to derive benefit from any treatment that has hitherto been devised. Such was the case in the instance of a gentleman who consulted me about two years ago, and who had relinquished all hope of getting relief from medicine, in consequence of the number of remedies which he had tried ineffectually.

From the state of the mucous membrane in his case, I was led to think that *arsenic* might be beneficial, and more particularly from the analogy which appeared to me to subsist between its pathological condition and that of the skin in some forms of prurigo. It was certainly given with advantage, and the results of its employment in this and other cases have been such as to lead me to think very favourably of it. Whether, however, its efficacy be such as to justify its general employment in these affections, my experience is as yet too limited to enable me to say; but I cannot doubt that it is worthy of a further and more extended trial.

Case. Mr. A. S. had for many years suffered during the summer months from hay-asthma, or rather catarrh; but his present attack had been of unusual severity, partly from the extreme dryness of the season, and partly from his having been obliged to live a great deal in the country during the summer, and consequently much exposed to the emanations from hay and grass. He had been suffering from this attack for many weeks before I saw him, and its severity had told painfully upon him. The whole of the respiratory surface, from the frontal sinuses to the bronchi, was excessively irritable, and in some parts inflamed; the eyes were blood-shot and suffused; the nose pain-

ful and tumid, and the nostrils inflamed and almost excoriated; his throat was dry and rough, and throughout there was a copious defluxion, with lachrymation and coryza. In addition to the local, the constitutional symptoms were severe. The pulse was quick, the skin hot, the tongue furred, the appetite bad, and the secretions from the liver and intestines scanty and unhealthy. The patient was restless at night, and had very little uninterrupted sleep. The continuance of these symptoms had very materially changed his appearance; he had become emaciated, pale, and haggard, and altogether was in a very pitiable condition.

Having learnt that he had consulted many persons, and taken various remedies without benefit, and having no particular treatment to suggest, I had intended leaving without prescribing; but it struck me, during my visit, that there was a close resemblance between the state of the respiratory mucous membrane in his case, and that of the skin in some forms of prurigo; and having often seen the beneficial effects of arsenic in the latter affection, I was led to think that it might be serviceable in the present case. Thus, in both there appeared to be a peculiar or specific irritation of their respective surfaces. Both appeared to depend primarily upon nervous rather than upon vascular disturbance, and each to consist essentially in an exaltation or perversion of nervous action,—the one of the organic, the other of the sensory nerves. Impressed with this view, I recommended a trial of this medicine. It was commenced on the 11th of July, in five-minim doses of Fowler's solution three times a day; and by the 16th nearly every vestige of the complaint had disappeared. The patient, however, was so sceptical in regard to medicine, that he was unwilling to believe that his improvement was attributable to it. He rather thought that the complaint had worn itself out, and this view was favoured by the lateness of the season: my own impression was otherwise; but I was willing to let the matter rest, to be decided by further investigation.

During that year, I saw no other cases of the disease; and it was not until the following summer that I was enabled to make any further observations in regard to it. I had then the opportunity of trying the medicine in several cases, and in all with encouraging success. A professional friend, whose experience and judgment are very great, has also given it, at my suggestion, with much benefit: and it has been given successfully by a practitioner of extensive practice in the country. These facts, so far, are favourable to its employment in these cases; and it is with the view of drawing attention to it, and of eliciting the results of more extended observation, that I am led to publish the present communication.

Of the precise pathological nature, or the proximate cause of hay fever, we are, as has been stated, altogether unacquainted; and we are therefore unable to deduce from a consideration of it any satisfactory method of treatment, and so far must be content to adopt either empirical measures, or such as analogy may suggest. I have remarked that the more obvious symptoms of the disease appear to depend upon, or to be connected with, a morbid irritability of the organic nerves of the respiratory mucous membrane; and that in this respect it presents some analogy to a kindred affection of the skin, characterised by extreme

irritability of the cutaneous nerves, and one at the same time in which arsenic is extremely efficacious. Upon this ground, I was more particularly first led to employ it; but there are other considerations which recommend it to our notice. In the first place, the *origin* of this complaint is very similar to some in which it has been given with much benefit, such as remittent and intermittent fever, neuralgic affections, and some forms of rheumatism, which, in common with hay-fever, are traceable to malaria, miasmata, or vegetable effluvia of various kinds; whilst in the more specific actions peculiar to these, and in the morbid condition of the nervous system which prevails, we see much that is analogous in all. But independently of these more specific diseases, we have many and undoubted proofs of the utility of arsenic, in correcting or controlling irregular nervous actions, and morbid conditions dependent upon them; and its remedial powers in chorea and epilepsy, in prurigo, lepra, psoriasis, and many other cutaneous diseases, may be cited in illustration. Within certain limits, most writers agree in considering it as a tonic; and as such, its action is especially marked upon the skin and the mucous membranes. An eminent practitioner remarked that, for strengthening and giving tone to the former, he knew of nothing equal to it; and in regard to the latter, it has evidently a specific action upon that of the whole respiratory tract. Hence its administration, when given too largely, or for too long a period, is occasionally followed by redness and irritation of the eyes and eye-lids, coryza, dryness of the throat, cough, and symptoms of pulmonary irritation; and, on the other hand, in moderate doses, it has been given beneficially in various irritable and morbid conditions of this membrane, such as is met with in asthma, hooping cough, catarrh, ophthalmia, etc.

Mr. Wm. Simmonds, of Manchester, gives the following report of its employment in hooping cough, in a letter to Dr. Duncan, published in the second volume of the *Annals of Medicine* for 1797, p. 393. "For upwards of three years, I have given arsenic in the hooping cough with the most salutary effect. In general, it has put a stop to the disease in about a fortnight; and it has never failed to moderate it in a few days. I have administered it in one unsuccessful case only, and even then it afforded considerable relief; and had I been called in earlier, or had I been permitted to pay the attention the case required, I am of opinion it would have succeeded in that also. I have used it in the form of the mineral solution of Dr. Fowler; and in the dose, and with the precautions recommended by him in his work on Intermittents, etc., children of a year old may take it with safety. Previous to, and during its use, bleeding, blisters, and emetics may be employed, according to the indications, particularly the latter. It should be continued until the disease is subdued; and then leaving it off for a week, it should then be had recourse to for a week, to prevent a return. Should exposure to cold occasion a relapse, it has hitherto put a stop to it, upon being taken for a few days."

In some forms of ordinary catarrh, I have myself given arsenic with the best results; but more especially in those cases in which the affection has been of a local character, and there has been an absence of inflammatory action, as well as of febrile disturbance. These circumstances forbid its employment; and it is because they so frequently occur in connexion with catarrhal complaints, that it is for the

most part inappropriate. Where, however, there is irritation of the mucous membrane rather than inflammation, as is especially the case in hay-fever, it may be employed with much advantage; as is shown in the following instances.

Case. Rebecca Lord, aged 45, applied at the Paddington Free Dispensary, October 8, 1850, suffering from catarrhal symptoms—sneezing, coryza, lachrymation, cough, and slight fever; tongue furred and unpleasant; bowels open. ℞ Liq. pot. arsenitis ʒj; vini ant. tart., vini ipecac., liq. potas. āā ʒiiss; aquæ distil. ad ʒxij. M. Fiat mistura cujus sumatur ʒj ter die. On the 11th, she was perfectly well; all the catarrhal symptoms had left her. She took eight doses of the mixture: but in twenty-four hours she was relieved of all uneasiness of the mucous membrane.

Case. Mary Ann West, aged 15, applied at the Paddington Free Dispensary, July 26th, 1850, suffering from catarrhal symptoms—coryza, lachrymation, defluxion, cough, sore throat, and slight febrile disturbance. ℞ Liq. pot. arsenitis ♏iiij; liq. potassæ ♏x; aquæ distil. ʒiss. M. Ft. haust. ter die sumendus. July 30. She was free from all catarrhal symptoms, and felt perfectly well.

Case. Margaret Liddon, aged 55, applied at the Paddington Free Dispensary, August 13, 1850, suffering from catarrhal symptoms, together with constrictive pain of the chest, dyspnœa, and cough. She had been troubled with these latter symptoms for some time; throat dry; tongue unpleasant and furred in the morning; bowels constipated; appetite bad. ℞ Liq. pot. arsenitis ♏xxv; liq. potassæ ʒj.; tincturæ hyoscy. ʒij; aquæ distil. ad ʒviij. M. Fiat mistura cujus sumatur pars sexta ter quotidie. Sumat pil. hydrarg. gr. v. August 23. She was entirely relieved of cough and all pulmonary irritation.

In catarrhal ophthalmia, and more especially in those forms which are of a passive, subacute, or chronic character, or where the irritability of the conjunctiva is excessive, arsenic has a very beneficial effect. I might subjoin cases in illustration of this fact, were it not well known to oculists, and referred to in systematic treatises on diseases of the eye.

Lastly, in intermittent headaches, brow ague, cephalalgia, and other affections in which the mucous membrane of the frontal sinuses appears to be the seat of pain, arsenic has proved efficacious. These facts are all of importance, in connexion with the subject of the present communication.

The cases of hay-fever in which I have seen it most serviceable have been of a catarrhal rather than of an asthmatic character; and I have given it, on an average, in doses of five minims of Fowler's solution three times a-day. Where, however, the attack has been slight, or the medicine has been given with the view of improving the tone of the mucous membrane rather than of correcting morbid action, three-minim doses, or even less, are preferable; whilst, on the other hand, if the irritation has been excessive or resists these, larger doses may be given, and their action modified or assisted in different cases by remedies of a kindred character.

Dr. Fowler, to whom we are indebted mainly for our knowledge of the efficacy of the medicine, was in the habit of prescribing it much more largely than is done at the present day. To adults, he gave his solution in doses averaging from ten to sixteen minims twice or thrice

a-day. He mentions that fifty minims were taken by mistake, within the space of nine hours, by a patient, without any very serious consequences ensuing; and that, in one case, twenty drops were taken three times a-day, with speedy and permanent advantage.

Dr. Brown (*Cyclopædia of Practical Medicine*, vol. ii, p. 228), who gave it in many hundreds of cases, states that he never saw any permanently ill effect arise from it. These facts are adduced, as showing the harmlessness of the medicine when properly given, and as meeting an objection which might otherwise be urged against its use.

Arsenic is best given, in this affection, in moderate doses, and I should propose smaller than those recommended by Dr. Fowler, whose experience led him to lay down the following rules for its administration: "Patients from two to four years," he says, "may take from two to four drops of the solution; from five to seven years, may take from five to seven drops; from eight to twelve years, may take from seven to ten drops; from thirteen to eighteen, may take from ten to twelve drops; and from eighteen and upwards, may take twelve drops as a dose." He advises that doses proportional to the age of the patient should be administered three times a-day for five days; then omitted for two or three days; and then repeated for three days, to prevent a relapse. These doses are mentioned with especial reference to the cure of intermittent fevers. They are much too large for the cases under consideration; for which, from one to five minims of the mineral solution may be considered as an average dose, and beyond this it will seldom be necessary to carry it, while positive harm may result. Seeing, indeed, that the state of the mucous membrane is one of morbid susceptibility to impressions, and that the medicine has a specific action upon it, it is important to keep within due limits and so avoid any severe or unfavourable reaction.

When the medicine alone fails to do good, its use may be alternated with quinine, or the two medicines may be given concurrently. Dr. Fowler found this practice successful, in the treatment of intermittent fevers, when either bark or arsenic, singly administered, failed to remove the disease. He observes: "if the solution and Peruvian bark have been given separately, and have failed, it will sometimes be advisable to try the joint power of the medicines at the same time, but in doses rather smaller than usual. In these cases, the solution should be given at stated hours three times a-day, and the Peruvian bark may either be given combined with it, at the same periods or between the fits, in as frequent doses as the stomach can bear." Another useful addition to arsenic, when the irritation of the mucous membrane is severe, or the stomach is unpleasantly affected by it, is opium, in small doses: indeed, its general employment in conjunction with arsenic has been recommended by many practitioners, as being calculated to render its action not only more certain, but less disagreeable to the stomach; and in cases like the present, where the irritability of the part more immediately affected is excessive, its use is otherwise appropriate. It is best given in small doses, not exceeding two or three minims of the tincture or of Battley's solution; and should it derange the stomach, or interfere with the secretory functions of the liver or other organs, some other sedative may be substituted. I have seen very favourable effects from the Indian hemp in cases of morbid irrita-

bility of the nervous system, and these would lead me to recommend a trial of it in the present disease. The most efficacious preparation is the ætherial tincture.

Lastly, when the irritation is most marked in the pulmonary portion of the mucous membrane, and the symptoms are of an asthmatic rather than catarrhal character, ipecacuanha, antimony, squills, or some other expectorant, may be given concurrently with it, if circumstances indicate the employment of such remedies.

But in addition to the more specific treatment of the disease, much may be done in the way of prevention, by invigorating the nervous system, and improving the tone of the respiratory mucous membrane; and measures that fulfil these objects should be perseveringly employed by persons who are subject to these attacks. In particular, the daily use of the shower bath, the application of cold locally to the chest, neck, and shoulders, and the use of cold collyria and gargles, may accomplish much good. The diet and regimen also should be subservient to these ends; and, if there exist an undue irritability of the nervous system, depending on a defective condition of the blood, steel in some appropriate form should be also given.

I would further observe, that when the disease is fully developed, and the irritability of the mucous membrane is very great and distressing to the patient, it may be very much mitigated by the occasional application of the vapour of warm water. By holding the face over a large basin of boiling water, and retaining the steam by means of flannel thrown over the head and shoulders, it is readily and directly brought in contact with the whole respiratory branch, and affords very striking relief to the irritation which exists. Of medicated vapours I have no experience; nor have I seen any benefit derived from the topical application of lotions of the nitrate of silver, etc. Indeed, seeing that the disease is seated rather in the nervous system than the mucous membrane, I should anticipate less benefit generally from local than from constitutional treatment.

These, then, are the principal points to which I would direct attention, in the treatment of hay-fever:—1. to preventive measures, comprehending, more particularly, tonic treatment in every available form, both local and constitutional; 2. to specific treatment, comprising more especially the administration of arsenic, and modified or assisted in the manner proposed, according to the requirements of individual cases; 3. and lastly, to soothing or palliative treatment, which is not inconsistent with the former, but may be advantageously combined with it.

In adverting to these points, and indeed, in treating the subject generally, I have endeavoured to confine myself as much as possible to such deductions as observation and careful reflection would warrant; but the subject is one so imperfectly understood, that I have engaged in it with some hesitation, and rather with the view of offering suggestions than of announcing positive conclusions.

Chester Place, Hyde Park Gardens, June 1851.

BIBLIOGRAPHICAL RECORD.

A Practical Treatise on Diseases of the Urinary and Generative Organs in Both Sexes. By W. Acton, late Surgeon to the Islington Dispensary, and formerly Externe at the Female Venereal Hospital, Paris. Second Edition. pp. 693. London: 1851.

Mr. Acton's well-known book has been so modified and enlarged, as to be virtually a new work; and as such we shall review it. It is divided into two parts; in the first, *Non-specific* diseases following sexual intercourse are treated of; and the second is occupied by *Syphilis*.

In an introductory chapter, Mr. Acton discourses of the origin of syphilis, (which he leaves precisely where he found it—in perfect obscurity); of the frequency of venereal diseases, (which is very great, more so than many imagine, nearly one in five being the subject of them in the army, one in seven in the navy at home, and one in three in the merchant service); and of the necessity of public measures in reference to the sanitary condition of prostitutes. We agree with much that he states, and are quite at one with him as to the worse than folly of refusing admission into our large hospitals to syphilitic patients; but we greatly doubt the possibility of effective legislative interference, and confess to share in the general repugnance which is felt in this country to the adoption of any system of registration, like that which obtains in Paris. That it does not check the prevalence of venereal disease in that metropolis, the source of much of our author's experience abundantly testifies; and that it has, at least, the *appearance* of legalising vice, is also evident. We think, also, that Mr. Acton's sketch of the "harlot's progress" is painted in far too favourable colours; and till we receive better evidence than that adduced, we shall hesitate to believe that well-doing mechanics, clerks, and petty tradesmen, seek their wives among discarded mistresses and the haunters of brothels. Mr. Acton must forgive us for withholding our assent from such a statement; and of expressing our belief that it is a mere fancy or gratuitous assertion of his own.

Blennorhagia is the term which our author applies to those discharges from the genito-urinary apparatus and from the conjunctiva which result from venereal disease. He limits the term *gonorrhœa* to those cases in which the discharge proceeds from the male urethra, employing it then only in deference to long-established use. The microscopic character of this discharge has been investigated by Dr. J. W. Griffiths. "'The secretion of the mucous membrane affected with gonorrhœa consists of muco-pus, but it varies somewhat in character according to the period of duration of the morbid action. In the very earliest stage, it consists of a simple white watery mucous fluid, but in a very short time it becomes yellow,[1] and this condition, in an unchecked gonorrhœa, lasts for some time; ultimately it loses some of the yellow tint, becoming more watery, and remains as gleet. During the very earliest period it consists of simple mucus, and under the microscope exhibits epithelial scales and their débris. During the second stage, it also contains these substances, but, in addition, albumen in solution, which is coagulable by heat, the precipitate not being dissolved by acetic acid; and the microscope detects very numerous pus-corpuscles, upon the presence of which the yellow colour is dependent, together with epithelial scales. In the latter and chronic stages, the number of pus-corpuscles is proportionably dimin-

[1] "In some cases the discharge is milky white, or nearly so, in the two first stages. In these, the corpuscles are of that kind which has been denominated *mucous*, exhibiting the molecular motion, etc."

ished, that of the epithelial scales increased, and the albuminous impregnation is diminished, or disappears.

" 'The urine (excluding the gonorrhœal deposit) in gonorrhœa does not differ essentially from its normal state; it is, however, usually of lower specific gravity, and very commonly contains small crystals of oxalate of lime. The pus-corpuscles increase the density of the deposit, which subsides by repose, so that the latter appears to the eye to contain a more copious and denser deposit than in health. The pus-corpuscles are also somewhat different in appearance from those of normal pus, being rather larger, less granular, more transparent, and less rapidly acted upon by acetic acid; in some the molecular motion is seen, in others not; the former properties depend upon the imbibition of the urine, the latter upon their being surrounded by the mucus, which defends them for a time from the action of the acid. They ultimately yield the same nuclei as normal pus. The urine in gonorrhœa also contains slightly more pavement epithelium from the bladder than the natural fluid; but I have not been able to detect the cylinder epithelium from the urethra to any amount. However, the presence of the pus-corpuscles, without excess of the vesical or renal epithelium, might guide in the diagnosis of the source of the pus.' " (pp. 26-7.)

BLENNORRHAGIA IN THE MALE.

Balanitis, or Gonorrhœa Preputialis. This consists in inflammation and patching excoriation of the glans penis and lining of the prepuce, accompanied by a muco-purulent discharge. The predisposing cause of this complaint is the existence of the prepuce; it does not occur in the circumcised. The exciting cause can be usually traced to the application of some irritating secretion, such as menstrual fluid, blennorrhagic matter, etc. It may arise from inattention to cleanliness. It is also met with in persons who have had abscesses close to the frænum, which have left little fistulæ through which the urine exudes. The only way to cure it in them is to heal the fistulæ. Balanitis may be complicated by abscesses which point at the upper part of the penis. The prepuce may also become gangrenous. Chancre is a very frequent complication, and eczema, particularly in old subjects. Simple balanitis never gives rise to secondary symptoms, as has been shown by M. Ricord's experiments by inoculation.

The treatment of the uncomplicated disease is very simple: it consists in washing the parts, carefully drying them, and by means of dry lint, accurately placed between the glans and prepuce, separating the two surfaces. If a slight inflammatory condition of the parts exist, it will be well to pass a stick of caustic over them, simply to whiten the surface, which should be previously dried by lint. The affected parts should be washed twice daily with a lotion of zinc and tannin, one grain of each to the ounce, then dried, and lint applied as before. When phimosis exists, lint wrapped round a probe should be carefully introduced between the glans and the prepuce, to wipe away all secretion; the prepuce then being gently drawn forwards, a solid stick of nitrate of silver may be introduced and brushed quickly over the surface, warm water being afterwards injected; or a strong solution may be injected, instead of using the solid caustic. If the phimosis be irremediable, the operation of circumcision must be performed. The following is Mr. Acton's method. "Without employing any traction, I trace in ink a line on the prepuce, which follows the circumference of the base of the glans, and is a little in front of it. This being done, the prepuce should be drawn forward and fixed between the blades of a pair of dressing forceps placed in front of the glans, and behind the line of ink traced on the prepuce; let the forceps be then held in this position by an assistant. Let that portion of the prepuce which is in front of the forceps be now drawn forwards by the left hand of the surgeon, while, at the same time, he with the right divides it in the oblique direction of the forceps, which thus protects the glans. In this operation the skin alone is removed, the mucous membrane is not drawn

forward with the skin, and remains intact; if we do not wish to see the phimosis recur, this portion of mucous membrane must be removed. To effect this, I employ a pair of scissors, slitting up the thin layer of mucous tissue as far as the base of the glans; the two portions should then be successively held apart by a pair of forceps, and removed by dividing them at the base of the glans, as far as the frænum, which is divided the last. I generally employ torsion of the arteries in these cases, to check the bleeding; lint dipped in cold water is then applied, and it may be advisable to administer an enema containing opium in the evening, or to prescribe camphor pills to prevent erections. A perfect cure takes place about the twentieth day, and the result is very satisfactory; there is no deformity, nor have we to dread a consecutive paraphimosis." (pp. 76-7.)

Gonorrhœa, or Urethral Blennorrhagia. We need not occupy either time or space by any notice of the progress or complications of this form of disease; our attention will be directed to the treatment, and here we shall quote our author's words.

"When a patient applies to me in the early stages of gonorrhœa, before scalding in making water has come on, or when the acute symptoms have passed, I at once employ a strong solution of nitrate of silver; but, as this efficient mode of treatment may become a very dangerous agent, I always inject the solution myself. The manner in which I proceed is as follows:—Having a solution of the crystallized nitrate of silver at hand, in the proportion of ten grains to the ounce, I desire my patient to make water; and, placing him in an erect position against the wall, I inject a glass syringe full (about two drachms) of the solution into the urethra, and by pressure retain the fluid in contact with the mucous membrane a few seconds. It is as well, in doing this, to suddenly distract the patient's attention by some remark, otherwise the passage of the fluid along the whole length of the canal may be impeded by spasm or contraction of the organ. I then desire the patient to sit down for ten minutes or a quarter of an hour in an arm-chair, and to withstand the desire of making water, which, for the first few minutes, sometimes is very violent.

"The effect of the injection on different individuals is very striking. Some scarcely feel any pain; others suffer for a few moments most acutely; but usually the agony goes off in three or four minutes, and is replaced by mere temporary soreness, so that the patient is able to walk about. I, however, generally recommend him to lie down on the sofa for an hour or so, and keep quiet.

"The quantity of discharge, like the amount of pain, differs greatly in different individuals. Sometimes no further *discharge at all* is seen, and the patient gets perfectly well. More commonly the injection is immediately followed by a large quantity of serous or shreddy exudation, which soaks through the lint. This exudation is followed by a stringy yellow discharge. In a few hours, this gradually becomes again serous, until it completely ceases, and redness of the meatus alone remains, which disappears in a few days.

"Of course, considerable pain would be felt did the patient make water immediately after the injection; but as the bladder has been previously emptied, micturition is not required, and the patient has only to combat for the first few minutes the desire to attempt it, and many hours will elapse before urine will be required to be passed, and by that time the effects of other treatment have been brought to bear, so that scalding is seldom, or never complained of by the patient.

"I have now no fear of leaving my patient, having applied a suspensory bandage, or what answers equally well, a handkerchief passed round the loins, and another tied in front and behind to support the testes, with strict injunctions to abstain from any kind of fluid whatever, so that the urethra should enjoy a few hours repose. On the next morning the discharge has either alto-

gether ceased, or a drop only is to be seen, and in the course of the day a mere weeping from the urethra occurs. The patient may now take fluids in moderation, consisting either of tea or soda-water; but coffee should be strictly prohibited, as well as wine, beer, and spirits. In some cases, towards the afternoon, the discharge returns again. If this becomes green or yellowish, I have no scruple in repeating the injection, with similar precautions; but I seldom have recourse to a third, and my patient is quit of a troublesome complaint in a very few days.

"The effect of nitrate of silver in a strong solution is very surprising, as may be judged of from the previous description. It appears to possess a specific action in changing the vitality of the mucous membrane, substituting for the original inflammation a new one, whose principal characteristic is its short duration: it destroys, likewise, the morbid element.

"Out of the large number of cases that have been treated on this plan, I have never yet seen any ill consequence arise, not even hæmorrhage or retention of urine. I may mention, however, that I have never employed the treatment except in private practice, where I have had the assurance that my patient would implicitly follow my directions. I should not recommend the treatment among out-patients at public institutions, nor, in fact, have I any expectation that any abortive plan will generally succeed with them, but, on the contrary, be attended with such consequences as would soon prevent a surgeon from employing the treatment in private.

"I must, however, confess, that this treatment has not, in my hands, been successful in the treatment of the first attack of clap in young men. In private practice, a consulting surgeon does not attend, generally speaking, very young men with their first attack. Shyness, or not knowing where to apply for advice, perhaps, is the cause; but of the fact there can be no doubt, that I am comparatively rarely consulted for first attacks. When consulted, the complaint has perhaps commenced several days, and the treatment is therefore no longer efficacious. From these circumstances, I am perhaps hazarding a wrong opinion; but, speaking from my personal experience, I would not advise caustic injections to be applied in cases of first attacks. No dangerous symptoms arise with common care; but I have not met with those certain results which have attended my treatment in persons previously affected." (pp. 88-91.)

But with these means Mr. Acton combines the use of copaiba, or cubebs, or both.

In Mr. Acton's experience, as we have seen, this plan has been eminently successful and safe; but that it is not always either the one or the other, is evident from a lecture of M. Ricord's which is quoted, and in which we find a formidable list of evils which may arise during its progress.

When the inflammatory stage has set in before the patient is seen, or when the abortive treatment has been tried and failed, the author adopts the ordinary antiphlogistic treatment, until the acute symptoms have subsided, and then has recourse to specifics and astringent injections. In reference to the last means, we would strongly recommend Mr. Acton's remarks to the notice of our readers, because we feel assured that one great cause of the failure of injections, is the very inefficient way in which they are usually employed.

Chronic Gonorrhœa, or Gleet. The chief point of interest in this section, is the view put forth by the author, that the cause of gleet is the existence of a granular condition of the mucous membrane of the urethra, analogous to that which the speculum reveals in the vagina, in cases of old standing discharges. In the treatment, he examines the passage by a wax bougie, No. 6 or 8. If an irritable unequal surface be detected, he uses the strong caustic injection, and gives copaiba or cubebs; following up by injections of zinc and tannic acid. If incipient stricture is detected, the nitrate of silver is not advisable; but bougies should be passed every other day, astringent injections being used in the intervals.

We pass by the three next sections, which include Stricture, Extravasation of Urine, and Fistula, because, though well worthy of perusal, they present nothing remarkably new to our notice. We may merely mention that Mr. Acton has a somewhat more favourable opinion of cauterisation, in the treatment of impermeable stricture, than we have been led to entertain; and that he has successfully treated the small fistulæ which often form just below the glans penis, by placing the smallest possible quantity of Vienna paste in the external opening. A little slough forms, blocking up the fistula, and cicatrisation follows in a few days; or it may be necessary to re-apply the caustic, on each occasion employing less and less of it.

Affections of the Prostate Gland. The following is M. Ricord's description of acute inflammation of that organ and the vesiculæ seminales:—

"This is a rare complication, depending either on too great intensity of the inflammatory symptoms, or on faults committed during the time the patient is under treatment. When the prostate is affected, all the symptoms become aggravated. There is augmentation of the perinæal pain, throbbing, difficult and painful micturition, or retention of urine, a tendency to constipation, with pain on going to stool, particularly when fæculent matter passes. When the patients attempt to sit down, if they cross their legs, the pain becomes intense, constituting symptoms of inflammation of the prostate. It has been said that a deep indentation on the upper part of the fæcal mass (which it has been asserted is caused by the impression of the enlarged prostate in the rectum), is one of the symptoms of the disease; this mark, however, would be impressed on the semi-solid motion, at the time that it passes the prostate, and those who advance this symptom seem to forget that the fæcal mass has subsequently to pass the anus, a portion of the rectum much smaller than that opposite the prostate, consequently any impression made by the prostate must be effaced. Examination with the finger introduced into the rectum is of great service in the diagnosis; it may determine the degree of swelling of the organ, and whether fluctuation exists, should either be suspected. When one of its lobes, or a part only of one of its lobes, participates in the inflammation, the enlargement will be irregular; sometimes the inflammation only passes along the prostate to attack the vesiculæ seminales; in these cases the enlargement is further separated from the median line, the generative functions take on increased activity, and the patients complain of very painful nocturnal emissions. It is important to be acquainted with these distinctions; for, when inflamed, the vesiculæ seminales present a feeling of distension, which might easily be mistaken for fluctuation. The surgeon can easily conceive the danger that would result, should an incision be made into these organs. The inflammation of the prostate and vesiculæ is followed by very severe local symptoms, but is not always attended with general reaction; sometimes vomiting, constipation, a tympanitic state, together with nervous symptoms, may arise, accompanied with fever. In some instances, I have seen the inflammation extend to the subperitonæal cellular tissue, and attack the peritoneum itself. Abscess in the prostate may open into the rectum, the pus generally escaping with the motion. In the majority of cases, the pus points in the direction of the urethra or bladder, in front or behind the neck of that organ. If into the bladder, pus can only be detected when the patients make water. If, on the contrary, the abscess empties itself into the urethra, the discharge takes place suddenly, at the moment the spontaneous bursting into the canal occurs, and at intervals between the times at which the patients pass their urine. Both these modes of opening of prostatic abscesses may be attended with urinary fistulæ; but should the abscess empty itself into the rectum, a fistulous opening is not to be dreaded. We shall see, in speaking of treatment, that it is best to give issue to the matter as soon after its formation as possible." [*Gazette des Hôpitaux*, 1847, p. 512.]

The diagnosis between this form of disease and inflammation of the neck

of the bladder, is assisted by remembrance of the fact, that the pain in the perinæum is increased on making water, lasting some minutes after the urine has passed ; but the calls to relieve the bladder are not frequent. In inflammation of the neck of the bladder, on the contrary, there is constant desire to micturate, small quantities only passing at a time, but with great relief to the patient.

In this treatment, leeches in large numbers should be applied to the perinæum, or cupping-glasses, warm baths and opiate enemata, with gentle purgatives. But if by these means, the patient is not so far relieved, as to be able to pass his urine freely, Mr. Acton advises immediate recourse to catheterism ; and for this purpose he prefers a silver catheter, having failed in the introduction of elastic instruments, from which the stilet has been withdrawn, according to Sir B. Brodie's plan.

Chronic inflammation and enlargement of the prostate are familiar to all, and need not delay us.

Epididymitis. This is a not uncommon complication of gonorrhœa. The pain commences in the perineum, extends along the course of the cord, and becomes fixed in the back of the scrotum. The discharge somewhat diminishes ; but beyond swelling confined to the epididymis, there are no marked local appearances ; and, by proper treatment and rest, the patient will rapidly recover. If, however, the patient neglects himself and takes exercise, " the consequences soon become apparent ; the swelling in the scrotum increases, great pain is experienced on making the slightest movement, and the patient supports the testicles with his hand, so great is his fear of motion, which aggravates the pain in the course of the cord. At this stage, he is often awoke by great augmentation of pain from nocturnal emissions, and he is surprised at seeing his linen stained with semen mixed with blood. There is, however, occasionally some alleviation of the suffering after an emission.

" M. Ricord states that he has seen pus intimately mixed with the seminal fluid. I have witnessed considerable augmentation of suffering to the dull aching pain in the perinæum when the patient goes to stool. A careful examination of the scrotum at this stage of the affection will show that there is not only redness of the skin, with great augmentation of heat, but that effusion has taken place into the tunica vaginalis. If the surgeon, with the left hand, embrace firmly the affected half of the scrotum, so as to render tense the testicle covered by its envelopes, and with the fore-finger of the right hand gently but suddenly press on the centre, a distinct feeling of fluid will be experienced, and the elastic body of the testicle will be felt below it. Should a lancet be thrust into the point where fluctuation exists, a clear or slightly turbid serum, varying in quantity, will often escape, and the size of the tumour will sensibly diminish. When the fluid thus contained in the tunica vaginalis has escaped, the greater portion of the remaining swelling is found to depend on the epididymis, which is hard and painful, and can be felt distinct from the testicle ; this appears to constitute the disease, at least in the majority of the cases. Effusion may not be confined to the tunica vaginalis ; we often see the subcutaneous cellular tissue infiltrated with serum, and become œdematous or phlegmonous : inflammation may result, and distinct abscesses form. However, when intense suffering has preceded, shooting upward to the loins, when much fever is present, accompanied with hiccup, a tendency to syncope, nausea, vomiting, together with excessive sensibility of the apex of the swelling, we may affirm that the testis itself is the principal seat of the affection ; and if the fluid in the tunica vaginalis has been allowed to escape, the testicle may be found hard, having lost its proper elastic feel, and seems to form a nodulated body which we are unable to distinguish from the epididymis."

The predisposing causes of the disease are fatigue, violent exercise, repeated sexual intercourse, and any circumstance producing excitement of

the organs. Mr. Acton relates a striking case, illustrative of the influence of excited passions (p. 197). Injections he does not believe ever produce it, unless they be used injudiciously. The *direct* cause is inflammation of the urethra ; and it is a significant fact, very suggestive of reasons for speedy cure of the original affection, that epididymitis rarely comes on during the first week, when the gonorrhœal inflammation is most acute. From some statistical tables drawn up by Mr. Gaussaile, it appears that the first week presented 3 cases, the second 4, the third 5, the fourth 16, the fifth and sixth 39, two months 2, and three months 1.

Terminations. The organ may recover itself completely. There may be hydrocele, or rarely effusion of pus or coagulable lymph. Abscess of the scrotum may occur, or it may become chronically thickened. The testicle may become hard and irregular, and suppuration occur ; when the slough separates, the seminiferous vessels become unravelled, and appear as so many shreds at the opening, and not unfrequently a fungous growth sprouts out.

The *Treatment* at first must be strictly antiphlogistic, and absolute rest be enjoined. If these means fail, M. Ricord recommends a somewhat bold practice :

"In some instances, if in spite of our treatment the disease increases, we should treat it still more actively ; if the symptoms become again aggravated, and suppuration occurs, free incisions should be at once made. One of my colleagues, M. Vidal, has very properly recommended that the old plan of Jean Louis Petit should be put in force. This consists in dividing the tunica albuginea, so as to overcome the state of strangulation produced by the inflamed seminal tubes. If orchitis exists, this division of the tunica albuginea is an excellent plan, although the operation might alarm many surgeons : still it is a very simple affair, and puncture of the tunic often takes place in tapping hydroceles, without any ill consequences. We can readily imagine that the division, even in cases of a sound testis, where there is only epididymitis, may do much good ; for a swollen epididymis may occasion strangulation of the testicle. The division should be made with a lancet, and extend one or two centimètres in length. Much alarm has been created relative to hernia and protrusion of the tubuli seminiferi, but experience does not bear out such a supposition." Mr. Acton also recommends strapping with mercurial, belladonna, and ammoniacum plaister, in cases of irritable testis.

Acute and Chronic Inflammation of the Bladder. Mr. Acton's descriptions and opinions precisely coincide with, indeed are largely taken from, those of the most established writers, and therefore we need not particularise them.

In obstinate cases of chronic cystitis, he, however, adopts a method of cure which is certainly not common. "Provided these means fail, and unfortunately failures are not uncommon, we must have recourse to the following plan of injecting the bladder with nitrate of silver. To effect this, I pass a gum elastic catheter into the bladder, and draw off the urine, and then, with a glass syringe, which fits accurately to the instrument, I inject the whole of the following solution into viscus : ℞ Argent. nitrat. ʒij ; aquæ destill. ℥iv ; M. ft. inject. The immediate consequences are, increased pain, which for the moment is very severe, the urine that is first passed is bloody, and some tenesmus is experienced. In a short time, however, these symptoms abate on the patient keeping his bed, and paying great attention to his diet ; at first no liquids should be taken, nor for the first few hours preceding the operation ; subsequently the usual quantity of tea or barley-water may be indulged in, and the various balsams, particularly turpentine or spruce, should be prescribed. In a very few days the urine will contain less of this ropy mucus, and ultimately none will be noticed ; in other cases, the injection may again be resorted to at the end of four or five days, and repeated until a complete cure is effected. We rarely or ever observe any of the ill consequences which probably might be expected to arise when injections are thrown into this important organ."

In the two next sections, we are presented with a full and very sensible discussion of those quack-patronized subjects, *Spermatorrhœa* and *Impotence*. We entirely commend the spirit in which they are written; and rejoice to find that Mr. Acton is not among the number of those who see the evidences of seminal weakness in every cachectic, low-spirited man who consults them. In the treatment of severe cases of spermatorrhœa, he has found injections of nitrate of silver more successful than the solid caustic, applied after the method advised by Lallemand.

BLENNORRHAGIA IN THE FEMALE.

Blennorrhagia of the Vulva closely resembles balanitis in the male, is produced frequently by the same causes, and cured by the same treatment. "It may affect the epithelium of the mucous membrane only, or, gaining the deeper parts, may occupy the glands or follicles, or even the vulvar glands, which we have compared to Cowper's glands, and which, according to M. Moulinier, ought to be regarded as the organs secreting the venereal virus. In the first stage, before the eye can detect any local change, the patient complains of an unusual sensation in the genital organs, and sexual intercourse is desired; there is itching, redness, heat, and swelling. The secretion now becomes greater; at first it is but the augmented flow of the normal moisture, but soon it becomes irritating, and adds to the inflammatory state. The discharge, however, soon takes on a muco-purulent character, and this is more apparent in proportion as the follicles become the seat of the disease. If the inflammation gains the deeper portions, considerable swelling occurs, which may assume an œdematous character, or become phlegmonous; when the nymphæ, naturally large, become inflamed, their size may increase to such an extent, that they may be protruded beyond the larger labia, and constriction of them take place, resembling what happens in paraphimosis. Not unfrequently, abscess follows these œdematous swellings. In stout women, the complaint may extend laterally to the groins, producing a most offensive discharge, attended with an eczematous state of the skin. The inflammation may likewise gain the apertures of the vulvar glands, which M. Huguier has so well described, and may reach the parenchymatous structure of these glands; and they may be felt through the thickness of the labia, as little abscesses, or they may gradually disappear, or may form cysts, which are not unfrequently found in this situation.

"A very frequent symptom of vulvitis is the exaggerated sensibility of the vulva, which is principally confined to young women. In long-standing cases of vulvitis, the passage may become narrowed so much as to produce a sort of stricture of the entire canal. This blennorrhagic affection of the vulva produces great sexual desire, attended with secretions and lascivious dreams, which, if occurring frequently, appear to weaken the patient considerably.

"*Treatment.* Among prophylactic means, cleanliness stands first. Vulvitis, like balanitis in the male, may come on in consequence of inattention to washing the parts. In the commencement a soothing plan should be employed, and separation of the surfaces attempted, followed by the use of lotions of nitrate of silver, in the proportion of ℥j to ℥ij of distilled water, with the addition of warm baths. Under these means a rapid cure results. If the inflammation has gained the deeper structures, the soothing plan is the best, or leeches may be applied to the groins; nitrate of silver lotions may be employed; if a phlegmonous condition of parts occurs, it may be better to rely only on depletion. The moment an abscess is formed, it should be opened; for pus has a great tendency to burrow in the loose cellular tissue, and make its way to the rectum, perinæum, or vulva, and recto-vulvar fistula may result. If the abscess is seated in the vulvar gland, it should be opened early. There is only one circumstance which should cause us to pause; namely, when inflammation occurs around an already formed cyst.

It would be out of place to give a detailed description of recto-vulvar fistulæ ; but I may mention that great good will result from compression in the course of the fistula, together with injections of strong solution of nitrate of silver, or cauterising the surface with the solid caustic. This cauterisation should be rapidly executed, if you wish the parts not to retract ; sometimes scarification of the edges will do good.

"As a consequence of chronic vulvitis, partial morbid secretion may be observed in the folds of the passage, particularly between the nymphæ and carunculæ. These secretions, which only become apparent when the surfaces are pressed, are very difficult to be got rid of by means of astringent injections or even caustic. They arise from the follicles which are hypertrophied, and being seated at a great depth, can only be reached by a narrow neck. To destroy these diseased parts, a narrow bistoury should be passed into the canals leading to them ; a free opening having been made, the surfaces should be freely cauterised, or filled with lint." [*Gazette des Hôpitaux*, 1848, p. 212.]

Blennorrhagia of the Urethra. This is much rarer than the other forms, and is almost always a consequence of sexual intercourse, whereas the other may arise spontaneously. The symptoms resemble those observed in the male, but are usually less severe. The abortive treatment may be successfully tried, the solid nitrate of silver being used, if the case be seen early enough. In the acute stage, antiphlogistic and demulcents are indicated, and subsequently copaiba and cubebs.

Blennorrhagia of the Vagina. Mr. Acton here quotes largely from a paper by M. Boys de Loury, surgeon to the Hospital in Paris, where the registered prostitutes are treated. He finds it to exist most frequently among young girls from fourteen to twenty years of age. The symptoms are itching and heat of the parts, and afterwards pain. On examining the interior of the vagina, we first remark pus lying between the folds, so that the canal presents two colours very distinctly, the furrows being of a yellow or greenish puriform shade, the rugæ of a vivid red. If the pus be removed, the membrane underneath is found of a still brighter red. Sometimes erosions are seen on the surface, in the form of red lenticular spots. In some cases, the disease occupies the entire vagina ; in other instances, the two inferior thirds, or even the upper half. In this latter case the os participates in the condition of the vagina, and assumes a brownish red colour, attended with augmented sensibility. A very obstinate form, which may be denominated *papular vaginitis*, is sometimes met with in women in advanced stages of pregnancy.

Vaginitis has by no means always a venereal origin. It is far from uncommon in unhealthy, scrofulous, ill-fed children : and Dr. Cormack and Dr. Barnes have recently described a form of it, which occurs in scarlatina. [London Journal of Medicine for 1850, pp. 869-72.]

Vaginitis is sometimes complicated with urethritis, and with inflammation of the entire pudendum. Abscesses also may form in the labia,—in some cases resulting in phagedæna. The os uteri may also become affected, and even ulcerated. According to M. Boys de Loury's statistics, the average duration of vaginitis, in the acute stage, is thirty-three days ; when complicated with urethritis, ulcerations, chancres, etc., it varies from six weeks to two months. Chronic vaginitis lasts from thirty to forty days.

In the acute stage, tepid baths and injections, leeches to the groins, and aperients, should be employed. In the chronic stage, astringent injections, and nitrate of silver are to be used. Mr. Acton applies the latter in the solid form, by means of the speculum. We have seen much good result from a strong solution applied by means of a sponge.

4. Blennorrhagia of the Uterus. This section is scarcely as full and precise as might have been expected. Mr. Acton recognises the frequent existence of non-specific ulceration of the cervix uteri, as, we believe, every man must do, who will take the pains to look for himself, and not suffer his

eyes to be blinded by prejudice. According to his experience, true chancres are exceedingly rare in this situation. But it must not be forgotten, that a woman suffering under discharge from an ulcerated os or cervix uteri, may communicate blennorrhagia to her husband, especially if, from any circumstances, the discharge be rendered of a more puriform character than ordinary.

Blennorrhagia of the Ovary. Mr. Acton believes that, as, in the male, epididymitis frequently results from gonorrhœa, so the female who is affected with blennorrhagia, may have ovaritis. He is inclined to think that the disease recently described by Dr. Hassing, of Copenhagen, as the colic of prostitutes, was of this nature. The same opinion was previously expressed by Dr. Tyler Smith. [London Journal of Medicine for 1850, pp. 756, and 922.]

BLENNORRHAGIA COMMON TO BOTH SEXES.

Blennorrhagic Ophthalmia. Of this very serious disease, Mr. Acton admits two varieties,—one arising from absolute contact of gonorrhœal matter with the eye ; the other, of a rheumatic, or catarrhal nature. We must refer our readers to the work for what is said upon both these forms.

Gonorrhœal Rheumatism. Our author fully bears out the general opinion of the extreme intractability of this affection. In many cases, he believes a residence in a warm climate to be the only cure. Several of his patients made full trial of the water system, but without deriving any benefit from it.

Blennorrhagia of the Anus. This is a very rare affection. Mr. Acton has only seen it in cases where unnatural crimes had been committed. Local treatment by nitrate of silver, is the proper method of cure.

NON-SPECIFIC AFFECTIONS FOLLOWING SEXUAL INTERCOURSE.

Warts, vegetations, herpes preputialis, eczema, and excoriations are treated of. We extract Mr. Paget's description of the microscopic character of warts : "The warts examined were specimens of ordinary appearance from the glans penis and the lining of the prepuce. They were narrow-stemmed, and on their broad and flat expanded parts bore a crowd of small and often flattened conical processes. In all cases they were of recent growth, and appeared very vascular. They consisted of two principal substances, namely, an outer epithelial covering, and an inner vascular tissue, like certain forms of rudimental cellular tissue. The epithelial covering was composed of numerous layers of tessellated, scale-like cells, resembling, both in structure and arrangement, the epithelial cells covering the glans and inner surface of the prepuce. The epithelium thus extended over the whole wart formed fully half its substance. The vascular substance of the warts was continuous with that of the thin dermal tissue of the glans or prepuce, and was connected with the subjacent looser cellular tissue. It consisted of a pale and obscurely filamentous blastema, in which were imbedded very numerous bodies, like nuclei, oval, shining, dark edged, well defined, made more distinct by acetic acid, and having no nucleoli. It had all the characters of such nucleated blastema as is found in the rudimental state of many normal examples of fibro-cellular tissue."

In the treatment, Mr. Acton makes no mention of strong acetic acid, which we have found very useful. He recommends powder of oxide of zinc in simple cases ; and in more obstinate forms, a powder composed of equal parts of ærugo and pulvis sabinæ.

The section on *eczema* is worthy of attention ; for this complaint is often mistaken for syphilis.

In our next number we propose to consider the Second Part of Mr. Acton's volume, which is devoted to Syphilis.

(To be continued.)

The Teeth and their Preservation, in Infancy and Manhood, to Old Age. By Alfred Canton, M.R.C.S.L. pp. 297. London: 1851.

This small volume will repay perusal: it is written by an author evidently as fully acquainted with the scientific as with the practical department of his profession. Not the least useful part is the appendix of prescriptions, which makes the reader independent of the trash so often vended as "dentifrices"; compounds which, in eight cases out of ten, are as valueless as they are dear. The absence of an index, or table of contents, is a fault which ought to be rectified, if a second edition be called for; which, from the character of the book, may be anticipated.

Outlines of Physiology, Anatomy, and Surgery. By William Wilkinson, Surgeon, Private Lecturer on Medicine. 12mo. pp. 412. Edinburgh: 1851.

Mr. Wilkinson has here condensed within very narrow limits a great amount of correct information, and has also clothed it in very simple language. To the embryo student at the threshold of his career, works of this kind are decidedly useful as pioneers,—as preparers of the mind for the perusal of more serious and more ample treatises; but so meagre a book of outlines can be of no value to the properly educated practitioner. *Mary's Grammar* is a capital book for the nursery; but when English grammar has to be learnt in good earnest, the child's decoy must be thrown aside for Murray or Latham. In the same way, the youth who has fairly entered upon his career of medical study ought to be above caring for Mr. Wilkinson's *Physiology, Anatomy, and Surgery*. As a book, then, we have no objections to the work before us; but we demur to the author's estimate of its proper and probable destiny. It is far more likely, we fear, to be used in the grinder's laboratory, than in the harmless way to which we have adverted; and assuredly it is not suited to educated practitioners or *bonâ fide* students of medicine.

Catalogue of Medical and Scientific Works: to which is added a Classified Index of Subjects, including the Names of those Authors who have treated upon them. pp. 83. London: 1851.

This is not a mere bookseller's list, but is a really valuable work. It "is intended to comprise books published within the last five and twenty years, excepting pamphlets and other publications of less than half-a-crown in price." The merit of authorship seems to belong to Messrs. Highley and Son, of Fleet Street.

Practical Remarks on some Exhausting Diseases. By Sir James Eyre, M.D. *Second Edition.* pp. 100. London: 1851.

The object of this small book is to illustrate and enforce the excellence of oxide of silver as a remedy in Epistaxis, Hæmoptysis, Hæmatemesis, Menorrhagia, Hæmaturia, Dysentery, Leucorrhœa, Epilepsy, and Chorea. When a practitioner is engaged in testing the powers of a pet remedy, he is very apt to adopt more favourable conclusions as to its therapeutic value than others are able to justify; and we ought therefore, perhaps, to receive the glowing testimony of Sir James Eyre, as to the efficacy of oxide of silver in the above-named diseases, with a certain amount of caution. Still, from our own experience, we can testify that the medicine is a good one; and undoubtedly the author deserves a considerable part of the merit of bringing its uses and mode of administration prominently before the profession, by the first edition of this work, which appeared in 1845, as well as by papers in the periodicals. It would be unfair in us to give an absolute verdict as to the greater value of gallic acid in most of the affections for which Sir James Eyre prescribes the oxide of silver, as we have not made extensive

comparative trials with the two medicines, and are not aware of any adequate experiments of this kind having been instituted. This much we can aver, however, that we could, *primâ facie*, make out as strong a case for gallic acid, as Sir James Eyre has made out for oxide of silver, though perhaps we could not clothe our monograph in such pleasing language, or conclude it with a peroration at once so plaintive and so powerful as that which we now transcribe.

"The grateful thanks of the author must now, in conclusion, be rendered, not only to those numerous friends (carefully selected, and anxiously retained during a stirring professional life of nine-tenths of half a century), for the help which they have given to him, both literally and orally, in this their united search after truth; the press, too, and the profession very generally, have assisted: one by generous commendation, the other by manfully working with him, trusting to the honest guidance of a stranger; each and all seeking the only reward worthy of the name, the pure and unsordid delight of doing good! Only four individuals were unable, they said, to discover any virtue in the medicine. These gentlemen must either have gone to the wrong laboratory: or there might have been a resisting idiosyncrasy in these medical men—who can tell? However it may have been, all that now remains is, for it to be *distinctly understood*, that the time for suing for information upon our subject, *in formâ pauperis*, is past; the writer declares, *suo periculo*, that there is no medicine so powerful, not only in the diseases already touched upon, but in some others yet to be set forth, as the oxide of silver in small doses." (pp. 109, 110.)

The author generally prescribes the oxide of silver in half-grain doses; but he also frequently gives it in smaller quantities. In cases of violent menorrhagia, he advises the doses to be repeated every five hours.

Nice et son Climat, avec des Notices sur le Littoral de la Méditerranée de Marseille à Genes. Par Edwin Lee. pp. 132. Paris et Londres: 1851.

This is a reprint of a portion of the author's *Manuel du Voyageur Valetudinaire*, the second edition of which, we are informed, is out of print. We do not know why this work by an Englishman, and evidently chiefly intended for the English, should have been written in French. It is, however, pleasantly composed, and contains the necessary information.

Mr. Lee is evidently partial to Nice; but in his details is, upon the whole, discriminating. Gouty, rheumatic, and paralytic patients seem to derive benefit from a sojourn at Nice. As for Genoa, we are told—and not untruly—that it is the worst climate in Italy. The beauty of the ladies is the only thing it appears which can be admired in that city: but even with the fair sex Mr. Lee is not quite pleased. They have abandoned as a head-dress the graceful veil (borrowed centuries ago from Spain), and now they are generally wearing in its place—like the foolish ladies of Madrid—fashionable French bonnets! Having been in Genoa, and having paid some attention to this matter ourselves, we can say with the author, "*le mantilla leur convenait mieux que les modes Françaises.*"

Prevention and Cure of Spinal Curvatures and Deformities of the Chest and Limbs; being the result of many years' experience. By Mrs. Godfrey, Renshaw Street, Liverpool. London: 1851.

Old women have in all ages been famous as quacks, and there is nothing very remarkable in a lady taking up the Spine; except that it had already been pretty well secured by charlatanic and, perhaps, also by other members of our profession. It is a new feature, however, in medical literature for a medical advertisement-book by a female to have the same publisher as the Pharmacopœia, and the sterling volumes of Williams, Robert Lee, Prout, Liston, and others.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

DELIOUX ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE VEGETABLE ACIDS.

Dr. Joseph Delioux, Professor of Materia Medica, in the School of Naval Medicine at Rochefort, has published in the *Gazette Médicale* for May 31, 1851, a valuable paper on the Physiological and Therapeutic Action of the Vegetable Acids. This article we now translate, with merely verbal curtailments.

The therapeutic effects of the vegetable acids are entirely distinct from those of the inorganic or mineral acids. The chemical differences between them are shewn up to a certain point in their pharmacodynamic actions, and hence an identity in their effects as medicinal agents ought not to be expected. The chemico-physiological actions of these two kinds of substances are distinguished chiefly by the following characters:

1. Most—it is incorrect to say all—the mineral acids coagulate albumen powerfully, and are thus plastic caustics (*caustiques plastifiants*) when pure, and more or less powerful astringents when diluted. Such are the sulphuric, hydrochloric, and nitric acids. Phosphoric acid, which has often been incorrectly classed with those which have no power of coagulating albumen, has an entirely distinct action, and is ranged among fluidifying caustics. The vegetable acids, on the contrary, like all organic acids, do not coagulate albumen; hence the strongest of them, employed pure, act as fluidifying caustics, and when diluted, they have no astringent action on the tissues. Tannic acid and its congeners coagulate albumen, but much less than the mineral acids; and the coagulum can be redissolved in an excess of the albuminous fluid. Tannin also acts strongly on gelatine; hence, when it is applied to animal tissues, which consist both of albumen and gelatine, it produces effects in which it is surpassed by no other astringent, and which it has moreover, the advantage of producing without irritation or pain.

2. Mineral acids, when introduced into the blood, do not undergo decomposition; they remain either free or combined, or are sooner or later eliminated. The organic acids, and especially the vegetable acids, when introduced into the blood, always, at least in part, undergo decomposition. The former may impede the circulation, by coagulating the albumen of the blood, and so diminishing its fluidity; the latter, having no coagulating power on the albumen, but often fluidifying it, retard the circulation in an entirely different manner, which will be presently described.

Those vegetable acids which have a strong affinity for bases, which strongly redden litmus paper, and possess a decided taste, have when concentrated, an energetic caustic action: in a lower degree of concentration, they are slightly caustic (*cathérétiques*); when very much diluted, or naturally weak, they have only a slight irritant action, or none whatever. Yet they must not be classed as astringents, if this term be restricted to those substances which condense the albuminous tissues. Viewed in this light, tannic acid and its congeners alone, among vegetable acids, should be considered as astringents. If, however, it be borne in mind that some of the acids, such as the acetic, are volatile, and that volatilisation always involves a certain lowering of temperature, it may be admitted that their application to the surface of tissues has a secondary refrigerating effect, which produces a constriction of the fibres analogous to that which results from pure astringents. It may even be supposed that, by irritating the nervous radicles, they call

into action organic contractility. But they will not be found to be such efficacious astringents as the mineral acids.

The vegetable acids, when absorbed, do not coagulate the albumen of the blood, but rather increase its fluidity. With the exception of tannic acid, they all combine with the alkaline bases in the blood; but the new salts are soon transformed into carbonates, their organic acid being destroyed and burnt up by the oxygen introduced into the system during respiration. To effect this, the acids being composed of carbon, hydrogen, and oxygen, absorb oxygen to form water and carbonic acid, which are expired, while a portion of the carbon is converted into carbonic acid, which combines with an alkali. But the oxygen thus consumed is borrowed from that intended for the arterialisation of the blood. And as the rapidity of the circulation is in a direct ratio to the oxygenation of the blood, the retardation of this movement will be the immediate consequence of the combustion of vegetable acids. This is the true explanation of the temperating action *(action tempérante)* of these acids. It is not based on speculative theories, but on the most positive results of chemical analysis. The fact of the destruction of the vegetable acids, established especially by the labours of Wöhler and Liebig, is well calculated to fix our attention on the power of chemical forces, which the organism holds in reserve; for we find them produce, at a temperature of 38° cent., a degree of reaction which can only be produced artificially at a red heat.

It is not, however, to be supposed that the whole of a vegetable acid, especially when taken in large quantity, is converted into carbonic acid and carbonates. The skin and the kidneys eliminate acids. The sweat is acid, and acetic acid is distinctly found in it; it might therefore be admitted that a certain quantity of this acid, when admitted by the primæ viæ, is rejected by the sudoriparous glands. The urine is normally acid, and owes this character chiefly to uric acid; it only becomes alkaline when, after some time, the urinous products have undergone ammoniacal fermentation. But moreover, in patients under treatment by vegetable acids, these have been detected in more or less considerable quantities in the urine. It has been said, that the organic acids alone can be eliminated in this way: M. Mialhe believes that, as they do not coagulate the albumen of the serum, they easily pass uncombined through the kidneys, while the mineral acids, detained both by their bases and by the albumen which they have coagulated, cannot enter into the urine.[1] But, although it be admitted to a certain extent, that the passage of mineral acids into the urine, is not so easy as that of vegetable acids, yet this power ought not to be altogether denied to the former. The experiments of M. Orfila show that in cases of poisoning with concentrated acids, not only the acetic, tartaric, and oxalic acids can be discovered in the urine, but that the sulphuric, nitric, and hydrochloric can likewise be detected.[2]

It remains to be explained how the mineral acids escape complete neutralisation by the alkalies in the blood, and how the organic acids can in part escape the combustion which commonly takes place in the lungs. The explanation of these phenomena is, I think, furnished by a peculiar anatomical arrangement in the abdominal venous system. M. Claude Bernard has discovered direct communications of pretty considerable size between the vena porta and vena cava, which turn the blood directly from the former into the latter. He also observed that the vena cava possesses: 1, Muscular fibres below the hepatic vein, tending to produce a reflux of the blood. 2, Valves at the level of the renal veins, so that the blood cannot flow farther down, but is obliged to enter the renal veins, which thus act as arteries. This arrange-

[1] Mialhe (M.) Considérations Chémico-thérapeutiques sur les Acides. *Union Médicale*, 1848, p. 88.

[2] Orfila. Traité de Toxicologie. 4me Ed. Tome i, p. 86.

ment explains the rapid passage of certain substances into the urine: it also shews how, when fluids have been absorbed in quantities capable of disturbing the hepatic and the cardiac circulation, nature has provided a diverticulum which ensures, in all circumstances, the maintenance of the regular course of the blood. But as this phenomenon occurs when large quantities of aqueous drinks have been taken in, and as the acids are generally administered in a large proportion of water, it seems beyond a doubt, that a portion of the acids may pass, with the excess of their vehicle, through this diverticulum, escaping both the neutralisation by alkaline bases and the combustion in the lungs ; and that it is in this way that the acids appear in the urine, in the same state as when absorbed.

This anatomical arrangement will also explain the rapid appearance of many other substances in the urine, and the innocuity or diminished noxiousness of certain poisons, as well as the varying action of different medicines, in proportion to the quantity of the vehicle in which they are administered; or the amount of solid and liquid matter with which they meet in the alimentary canal.

There is another class of physiological considerations which are important in the administration of acids.

In the animal economy, the great majority of the fluids possess the alkaline character : acidity is only manifested rarely, and as if in exception. In the vegetable economy, the contrary is observed : the acid has the precedence of the alkali.

The three principal humours of the human body—blood, lymph, and serum—are strongly alkaline ; and so are most of the fluids which emanate from the blood. All the recrementitious fluids are thus alkaline ; while an acid character is shewn only in the excrementitious fluids, several at least of which, as urine and perspiration, seem principally intended for the elimination of acids. It may be objected, that secretion of acid takes place on extensive surfaces, both on the skin and on the tegumentary mucous membranes. But the quantity is small, in proportion to the mass of alkaline fluids enclosed in the body or effused on its surfaces. Besides, an acid secretion is almost everywhere accompanied by an alkaline : thus, in company with the sweat, we find the alkaline sebaceous secretion, which completely effaces the acidity of the transpired fluid in certain cutaneous folds : in the vicinity of the acid fluid which exudes from the muciparous follicles, the glands and glandules discharge on the mucous membranes the saliva, pancreatic juice, etc., all of which are alkaline. The antagonism between the acid secretions of the external integument and the alkaline secretions of the internal integument has been too absolutely expressed. The antagonism does exist, but it is on the spot, and not at a distance. All the humours whose office it is to digest alimentary or medicinal substances, owe their efficacy to an albuminoid matter which only acts in the presence of alkalies, not merely in the digestive canal, but also in the blood. In the latter, M. Cl. Bernard has ascertained that sugar is transformed, not only under the influence of alkalies, as had been said before him, but also, as in other parts, of an albuminoid matter. The only exception to this great law is the gastric juice, the pepsin of which acts in the presence of acids.

The moderate use of acid drinks produces a state of calm and comfort in certain febrile and inflammatory conditions ; but they may produce evil and even disastrous results, where wrongly or inconsiderately administered. The abuse of the vegetable acids produces anorexia, dyspepsia, mucous and serous fluxes, atony, paleness, œdema of the tissues, slowness of the circulation with smallness and weakness of the pulse,—the debilitation, in fact, of all the assimilative functions. And the result cannot be otherwise: for they tend to alter the constitutional crasis of all the fluids of the living body, and especially to deprive the digestive fluids of the properties indispensable to the

performance of their elaborative functions, without which nutrition cannot be normally performed. And, if this abuse be pushed so far as to produce acidification of the blood, diabetes might be the fatal consequence, if the ideas of some modern authors on the pathogeny of that affection be correct.

Some good advice may be given to those persons who, while in perfect health, make an immoderate use of acid drinks. These may produce less inconvenient effects during the summer and during hard exercise, than in the winter and when the corporeal forces are inactive; because, under the first named circumstances, the sweat removes from the system those principles whose excess might be hurtful. But they have not the advantages which the seductive attraction of a transient coolness seem to promise; for, after appeasing the thirst, they leave the individual in a state of atony, while a slightly spirituous or cordial drink stimulates and re-animates. An intelligent reform has been effected in this sense in the navy, by the substitution of brandy for vinegar in the drink of sailors in hot seasons or in intertropical countries. Nothing can more clearly shew the pernicious action which is exercised on the economy by the obstinate use of acid drinks, than the experiments made by the coquette threatened with obesity. Vinegar, the common weapon against this enemy of beauty, will at the end of a certain time cause the disappearance of the adipose secretion, and also of the health. She will indeed grow thin; but she will at the same time poison herself.

Physiologists, toxicologists, and therapeutists have ascribed a more powerful effect than I am disposed to allow, to the local effects of vegetable acids. For example, all the modifications which absorption and nutrition undergo in consequence of their abuse, have been ascribed to the astriction produced by their contact. But this hypothesis is contradicted by carefully observed chemical, physiological, and pathological facts. The non-coagulating vegetable acids cannot tan the tissues, nor, consequently, close their absorbent pores; on the contrary, they pass easily into the circulation, and it is in the blood that their action is developed.

Intestinal fluxes may sometimes indeed be restrained by vegetable acids: but this is not to be ascribed to their pretended astringency. Cases of this kind have probably been ill interpreted; and we are the more warranted in believing this, as it is now known that diarrhœa is sometimes kept up by the super-alkalisation of the intestinal juices. The employment of acids would correct this by an entirely chemical action. Some persons consider the digestive canal as a mere tube, through which the matters taken in pass from one end to the other; and that, when the medicinal effect of any substance is required, it is arrested at that part of the canal where we wish it to act. But such persons should remember, that medicines soluble in the stomach, and liquids, when not in great quantity, are absorbed without passing beyond the pylorus; that it is only insoluble medicines, or an excess of fluids, that reach the intestines; that these liquids are readily absorbed by the veins; and that aqueous drinks only descend into the lower part of the small intestine when they have not been absorbed higher up, which is an exceptional case. It is, then, impossible to admit that acids, especially those which do not coagulate, act locally on those parts of the alimentary canal which are the source of the diarrhœa.

In the time of iatro-chemistry, when all pathogeny was founded on the acidity or the alkalescence of the humours, the acids formed the half of therapeutics. Again, in the reign of Broussaism, when irritation was everything in pathology, and gastritis was at the bottom of every irritation, then lemonade shared with diet and bleeding the honour of uniformly and easily curing all diseases. At the present day, acids are found to be far from being so useful as alkaline medicines. The use of the vegetable acids only depends on a small number of indications, which are, however, distinct enough to

warrant their rational employment; but their unseasonable use, or their abuse soon destroys their merit. Alkalies, on the contrary, enter largely into rational treatment: there is less danger in super-alkalising the organic fluids, than in introducing an element incompatible with the regular exercise of the functions which these fluids are intended to fulfil.

The vegetable acids may be divided into THREE GROUPS, each of which is characterised by distinct properties, and capable of special application. This division is also equally rational in a chemical point of view.

I. PURE ACIDS. These shew most distinctly the physiological and therapeutic characters of the vegetable acids. All that has been already said is immediately applicable to them, and it only remains to give a summary of their qualities.

When concentrated, they act as caustics, corroding and often perforating the tissues. When administered internally in that state, they produce all the symptoms of irritant poisoning: their antidotes will then be those of all acids, as magnesia, chalk, soap and water, alkaline solutions, or any substances which, by saturating them, form salts incapable of doing harm. In proportion as they are diluted with water, they lose their irritant properties. They may then, when applied to the surface of wounds, produce a cleansing rather than an astringent effect. They may, through the refrigeration caused by their evaporation, and the irritation which they excite in the organic contractility, give rise to a certain degree of fibrillar astriction, at the same time that they moderate the peripheric heat of the body. Administered internally, in medicinal doses, dissolved in large quantities of water, they refresh, especially if their vehicle be of a low temperature. They are promptly absorbed, and as promptly eliminated by the kidneys and skin, or transformed in the blood into water and carbonic acid; the latter being in part eliminated by the lungs and skin, in part saturated by the alkaline bases in the blood. The result of this combustion is to diminish the arterialisation of the blood: it would seem to keep the arterial blood in a state more or less like venous, as at least M. Orfila has seen in his experiments on acetic acid. It is thus that the cooling effects of vegetable acids can be explained. Giacomini, when he called them *venous hyposthenics*, was wrong in restricting to a portion of the circulation a sedative effect which is exercised over the whole of that system. This hyposthenic effect is aided by a diuresis, which renders still more active the simultaneous ingestion of a large quantity of drink; and it is often increased by secondary diaphoretic effects, connected with the depurative function of the skin in regard to acids. These effects are produced especially when the acidulated drinks are hot, or when, though cool, they are taken by persons under the influence of a high external temperature. In the latter case, the result is exactly the opposite of what is desired; for, by provoking profuse perspiration, the previously existing weakness of the individual must be increased. Finally, if vegetable acids are sometimes useful in modifying a too highly alkaline state of the fluids, they should be used cautiously, and not persisted in; and the nature of the normal crasis of the fluids, adapted to the conditions of animal life, should be always borne in mind.

II. ACID FRUITS. These contain one or more organic acids, especially the tartaric, malic, and citric, to which they owe a part of, but not all, their therapeutic properties. The alkaline bases, here present, act also as efficaciously, and less hurtfully, as temperants, sedatives, and diuretics. Acid fruits are far from producing the same inconveniences as free acids: they present to the assimilative powers a combination of acids with soda, lime, and chiefly potassa, and rendered still more mild by pectin and sugar, so that the oxidation in the blood acts chiefly on a salt formed by a vegetable acid, and the result of the transformation is an alkaline carbonate. Unripe fruits, in which the acids predominate over the sugars and the alkaline bases, produce

well known inconveniences to digestion and nutrition, by super-acidifying the fluids: but ripe fruits act by their alkaline bases as much as, and more than, by their acids. Grapes, for instance, which are rich in bitartrate of potash, render the urine alkaline, and may be employed with manifest advantage in diseases where mineral alkaline drinks are indicated.

III. Tannin and Tanniferous Substances. This group is well characterised. Tannin is met with, more or less modified, in a great number of medicinal substances, which owe to it their peculiar astringent properties. Tannic acid, the only coagulating organic acid among those which are used in medicine, may act in this way much more efficaciously than all the vegetable acids. To it alone may be granted the property of modifying the absorbent power of the tissues by tanning them; and there is no doubt, that, if immoderately persisted in, it will produce great alterations in absorption and exhalation. But its coagulating power is not so great as its property of being absorbed: for, when either dissolved in an abundant vehicle when taken in, or, if it is administered solid, dissolved at a later period by the gastric or intestinal fluids, its plastifying power is diminished as it is diluted, and the coagula formed are susceptible of being redissolved by the alkaline salts in the digestive fluids. When introduced into the blood, its action is less understood than that of other organic acids. It must undergo combustion like them, and a certain degree of excitement of the circulation must result: but the therapeutic effects obtained by its use, and characterised by a general state of astringence and tonicity in the organism, agree better with the hypothesis of a coercing action on the albuminous elements in the blood.

DR. BURROWS ON DISEASES OF THE ANTERIOR MEDIASTINUM: MEDIASTINAL TUMOURS.

Dr. Burrows, in a clinical lecture on the more important Diseases of the Anterior Mediastinum, published in the *Medical Times* for June 7th, 1851, directs special attention to tumours occupying that region. They may be either tubercular or malignant growths: he believes them to be most commonly carcinomatous.

The development of a tumour in the anterior mediastinum is often slow and insidious, and, from its rarity, is often unsuspected. Its existence is more especially indicated—1. By the usual symptoms of irritation and pressure on some portion of a respiratory tube; 2. By various local symptoms, resulting from pressure and obstruction to the return of blood to the heart through the cava superior or its tributary veins; 3. By physical signs, indicating the presence of a solid in the upper part of the thorax, capable of transmitting the heart's sounds far beyond their proper limits, and modifying the respiratory murmur in the upper lobe of one or perhaps both lungs.

In the earliest periods, there are repeated and distressing attacks of urgent dyspnœa, coming on in the night, and resembling spasmodic asthma. During the paroxysm, and even at other times, there is uneasiness immediately above the sternum, in the lower part of the windpipe, and an inclination to cough up something which causes constant discomfort. The dyspnœa may subside after the patient is roused from sleep, and has preserved the erect posture for a short time, or after the expectoration of some viscid mucus. Auscultation and percussion seldom yet give any precise information. If an examination be made during the paroxysm of dyspnœa—which is, however, scarcely practicable—there will probably be heard loud tracheal sounds, masking all other respiratory sounds; or tubular breathing, with rhonchus, will be heard over a considerable portion of the chest. When the asthmatic seizure has declined, the tracheal sounds will subside; some rhonchus or large crepitus may be still heard through a portion of one lung; and sometimes the vesicular murmur is weakened in some portion, while the resonance on percussion is healthy.

The suspicion of some cause of pressure on the respiratory tubes near the bifurcation of the trachea, to which the continuance or frequent recurrence of the above symptoms might give rise, is strengthened by various local signs of pressure and obstruction to the return of venous blood to the heart through the vena cava and its tributary veins. The cutaneous veins about the upper sternum and one clavicle—generally the right—become more conspicuous than natural. The external jugular, the thyroideal, the mammary, and thoracic veins, become permanently enlarged and tortuous ; and the current will probably be ascertained, by making pressure at various points, to be moving in a direction the opposite to that which is natural. After a while, the superficial veins of one upper extremity become enlarged and conspicuous. Œdematous swelling is now observed on one side of the throat, about the upper portion of one side of the chest and in the upper extremity, and, in adult females, in the corresponding breast. This œdema will at last extend to the face, especially the eyelids, which become puffy. The eyes have a glassy, watery look, with rather dilated pupils ; this state of the eyes is not unfrequently observed where there is an obstruction to the passage of blood through the right cavities of the heart.

Careful and repeated auscultation and percussion will now indicate the presence of some solid beneath the sternum, which transmits the heart's sounds far beyond their proper limits, and which seriously impairs and modifies the healthy respiratory murmur in the upper lobe of one lung, and perhaps afterwards in a greater extent. The heart's sounds will be heard distinctly to the summit of the sternum, and to a varying extent, beneath the right clavicle; but without the peculiar blowing sound which generally attends aneurisms. The pulsation of an aneurism is also absent. The lower portion of the trachea is more or less forced out of its normal situation. The respiratory murmur will be impaired or inaudible over certain portions of the upper part of one lung; and if any breath-sound be heard, it will be tubular or bronchial. As the case advances, the respiratory murmur is much impaired in the lower part of the affected side. The stroke-sound is dull all over the sternum, over the greater part of the front of the affected side, and posteriorly over the scapula, towards the root and base of the same lung ; while it is resonant in the axilla of the affected side. The dyspnœa, the orthopnœa, and ineffectual cough, together with the above-named physical signs, may lead pleuritic effusion to be suspected. Some may indeed exist; but it will be quite inadequate to explain all the distressing symptoms of asthma which have been observed. Moreover, the most resonant parts of the affected side are in the axilla and hypochondrium, while the greatest dulness is detected in the subclavian region and towards the root of the lung—phenomena the reverse of those of advancing pleuritic effusion.

The dyspnœa is now urgent and constant, occasionally threatening immediate suffocation. The patient remains in a state of orthopnœa, probably unable to speak or swallow, without bringing on a dreadful increase of suffering. The progress of the disease is well illustrated in the following cases.

Case I. J. L., aged 15, was admitted into St. Bartholomew's Hospital, on March 7, 1850. He was thin, pallid, and delicate looking; the eyes were slightly suffused; the lips dry and parched; skin warm; pulse 132, very small and soft; tongue red, with elevated papillæ; bowels open; urine abundant. He complained of dyspnœa, and of a peculiar croupy tracheal cough, with copious thin frothy expectoration, and of some pain in the chest, chiefly between the scapulæ. He was supposed to have caught cold about two months ago, since which he had complained of pain in the chest, a bad cough, failing strength, and loss of flesh.

On auscultation, there was prolonged, loud, coarse, tubular breathing all over the right side in front and behind, and less intense tubular breathing in the left subclavian region ; also behind over the upper part of the left

side, while vesicular breath-sound was heard in the left infra-scapular and axillary regions. The stroke-sound was completely dull all over the right side, across the sternum, and over the upper part of the left side before and behind: the resonance was good in the left axilla, and impaired in the lower half of the left side behind.

The dyspnœa, cough, and difficulty of expectoration went on increasing; and the right external jugular, and some other veins of the neck, were found distended, and the trachea was thrust towards the left side. On March 26, there was increasing congestion of the veins of the neck and shoulder, œdema of the right arm, and the trachea passed to the acromial side of the sterno-mastoid muscle. He died on March 29, more from asthenia than apnœa.

Post-mortem Examination, made on the following day by Dr. Kirkes. The lower portion of the trachea was pushed beyond the left sterno-clavicular articulation. On removing the sternum, there appeared a large mass occupying nearly the whole right side of the chest, extending forwards rather beyond the middle line, and passing upwards under the trachea, towards the left sterno-clavicular articulation. In front, the mass was adherent to the sternum; laterally and above, it adhered to the costal pleura, and had caused slight erosion of the upper ribs; below, it extended beneath the level of the fifth rib. The mass appeared to have originated in the tissue of the mediastinum, and to have encroached upon the substance of the upper lobe of the right lung, which was greatly compressed, devoid of air, of a pale leaden colour, and apparently quite free in structure from any portion of the foreign growth. The middle and lower lobes of the lungs were also much compressed, and almost empty of air. This compression, however, seemed to be partly due to a little fluid which occupied the lower part of the pleural cavity. By means of the growth, the heart was pushed unusually to the left side; the large vessels in the mediastinum were elongated and distorted, but apparently not sufficiently compressed to materially interfere with the transit of blood; the œsophagus and trachea were displaced and compressed. The right bronchus passed through the middle of the mass, and appeared very narrow.

The malignant growth was uneven and nodular on its surface; it was covered by a smooth membrane, evidently formed of the pleura. The superficial portions consisted of masses of white, soft, medullary carcinoma. The great bulk, however, was made up of a soft, friable, pale-yellowish material, abundantly infiltrated with dark extravasated blood. This effused blood constituted a large part of the whole mass, and was in many places disposed in large masses, though usually it was scattered in points and streaks in the midst of the reticular yellowish material. Interspersed within this peculiar material were several masses of ordinary soft cancer, reduced to the state of pulp. The left lung and heart were healthy. No other part was particularly examined.

Case ii. Miss — aged 26, a patient of Mr. Stewart of Aldersgate Street, was seen by Dr. Burrows on April 6, 1850. She was suffering from severe orthopnœa, and congestion and œdema of the upper part of the body, principally on the right side. No careful or prolonged physical examination could be attempted; but over the greater part of the right lung there were dulness, rhonchus, large crepitation, and transmitted tracheal sounds.

The patient had been in apparent health a month previously; but had been attacked with cough and other symptoms, which had led pleuritic effusion to be suspected. Dr. Burrows suggested occasional doses of chloric ether, and mustard poultices to the chest.

April 8. The chloric ether had afforded some relief, but there were still orthopnœa, œdema, and difficulty of deglutition. Auscultation detected loud tubular breathing, with bronchophony all over the upper part of the right lung before and behind; and there was great dulness on percussion. The breathing was less tubular, and the percussion rather less dull, in the axilla and over the lower part of the same side. The heart's sounds were trans-

mitted to the right side, while the impulse was felt more in the left axilla than normal. The breath and stroke-sounds were nearly normal on the left side. From these symptoms and physical signs, Dr. Burrows diagnosed the existence of a mediastinal tumour, and advised, as palliatives, the continued use of chloric ether and counter-irritants, and iodide of potassium internally and externally. The patient died early in May.

Post-mortem Examination. On removing the sternum, the upper and middle part of the right pleural cavity was found occupied by a large lobulated mass of brain-like cancer, continuous with similar masses in the mediastina, and adherent to the costal pleura, especially in the mammary and axillary regions. Several various sized independent masses of medullary cancer, in different states of softening, and of various shades of colour, from milk-white to dark chocolate, were scattered through the substance of the lung. The lower half of the pleural cavity, and the various spaces between the projections of the malignant growth, contained about a pint and an half of turbid serum. The right bronchus, in its course to the lung, passed through the midst of the mass, and, immediately after entering the root of the lung became very narrow; then it, and nearly all the various branches to their termination, suddenly opened out into wide pouch-like dilatations, interrupted here and there by constricted portions. Many of these dilatations appeared like large cysts, filled with thick, tenacious, puriform mucus. The mucous lining was red, rather coarse, but moderately smooth. The large masses situated in the mediastina, and lying along the bodies of the dorsal vertebræ, had displaced and compressed the roots of the great vessels at the base of the heart; while the superior cava, which was quite encircled by one of the masses, was so extremely reduced in size at its entrance into the auricle, as scarcely to admit of the passage of a narrow probe along its canal. Above this point, the vessel gradually assumed more of its ordinary diameter; its interior was smooth, and it contained no coagula. The inferior cava was rather above its ordinary size. The pericardium contained some turbid serum, in which a few flakes of recent lymph were suspended. Its surface presented numerous patches of vascularity, especially where spread over the roots of the great vessels, and over the nodules of the cancerous masses which projected into the cavity at the base of the heart. The heart and left lung were healthy. No deposits were found in the kidneys, liver, spleen, or other parts examined.

PURULENT PYELITIS: CALCULI IN PELVES OF KIDNEYS.

The following case was related by M. Charcot.

Case. A young girl, aged 18 years, was admitted into the Charity Hospital, under M. Briquet, on March 10; she died on the 20th of the same month. She had had sharp pains in the kidneys at various times for three or four months. There were, however, no symptoms of true nephritic colic; and she stated that she had never passed gravel or calculi with the urine. On admission, there was slight fever, with evening exacerbations; she had some erratic rigors; and there was pain in the loins, increased by pressure, and more severe in the right lumbar region. Percussion shewed that both kidneys were increased in size, but the right more than the left. Five or six days before entering the hospital, she had been attacked with hæmaturia for the first time. After this, the urine, which was in almost normal quantity, became thick and very fetid, and exhaled a gangrenous odour, especially towards the end of her life. When left to stand, it deposited a purulent sediment: the supernatant portion, however, did not become clear, and gave a copious precipitate with nitric acid. On the last two days of life, the patient presented the symptoms of a pretty severe typhoid state. She had no vomiting. The treatment principally consisted in the application of cauteries, by Mayer's process, to the region of the right kidney.

Dissection. Both kidneys were enlarged to almost double their natural size. This was due to a dilatation of the pelvis with fetid pus; its walls

were covered with a green false membrane, and presented in some points ulcerations of a gangrenous aspect and odour. The substance of the kidneys was thinned and flattened, but not otherwise altered. A calculus of the size of a haricot bean was found in the pelvis of each kidney; and the pus in the pelvis of the left kidney also contained one of the size of a large pea. The ureters were double their normal size, and the walls were thickened; they also here and there presented dilatations. The mucous membrane of the bladder was thickened and brown. [*Gazette Médicale de Paris*, May 31, 1851.]

CASE OF HÆMOPTYSIS (?) NEONATORUM.

The history which we are about to quote is published by Dr. Charles G. Adams, in the *American Journal of the Medical Sciences* for April 1851, p. 364 This case was probably one of *congenital purpura*, or what the French writers call *hémorrhagie constitutionelle;* and therefore, as the history given by Dr. Adams does not fully justify the title which he has prefixed to it, we have added a note of interrogation. The nasal and buccal mucous membranes seem as likely as the pulmonary to have been the source of the hæmorrhage. The case, in fact, was an extreme one of the familiar affection termed (so improperly) *icterus neonatorum*, in which, as also in certain congestive fevers, the skin, after purpling, becomes yellow, not from the colouring matter of the bile, but from effusion of blood into the cellular tissue under the skin, the result of hyperæmia, associated with a morbid condition of the blood and the capillaries. The change of colour is identical with what takes place in a bruise. We have compared the report of the *post-mortem* appearances in Dr. Adams's case, with some of those recorded by Dr. Cormack as characterising "the yellow and highly congestive cases" of the fever which prevailed in Edinburgh in 1843-44, and have been much struck with the similarity. In the infant whose case is now to be described, as much as in the cases of fever, the disease was clearly constitutional, involving a morbid condition of the blood.

History. The infant—a female—was born after seven and a half months' gestation. The labour was natural; but the funis was round the neck, and respiration was established artificially. During the first twelve hours, the respirations were feeble, and there was no pulse at the wrist. The infant, afterwards nursed, and cried well, had natural evacuations from the bowels and the bladder, a pulse at the wrist, warmer extremities, and freer respiration. But, about an hour before death, it had a sudden discharge of bright arterial (?) blood from the mouth and nose, with symptoms of suffocation, which led the nurse to think it was dying. It rallied, however, and respiration again became comparatively easy. In thirty or forty minutes, it suffered another similar attack of hæmorrhage, under which it sunk, twenty-four hours after birth. The quantity of blood lost might have been five or six drachms.[1]

Necropsy thirty hours after death. *Exterior.* The skin had universally a uniform yellow tint. Upon the neck and upper extremities were seen numerous petechiæ, or circular livid spots of extravasated blood, varying in size from a diameter of half a line to three or four lines. [These were observed before death.] There was no *rigor mortis.* The *encephalon* was not inspected. *Thorax.* The thymus gland was healthy. The lungs were of a very dark livid colour; and solid, except a small portion on their lower anterior edge (perhaps one or two cubic inches), which was of a more healthy hue, crepitated under pressure, and alone had a specific gravity lighter than water. Upon incision, the solid portion presented a surface almost black, glistening like the cut surface of a coagulum, though less smooth and uni-

[1] The mother's first labour, which had occurred ten months previously, was also premature. The child was born in a putrid state at the commencement of the ninth month. The father is a slender man, and has had two attacks of hæmoptysis.

form. The bronchia, where they could be traced, were filled with a bloody frothy mucus. No tubercles could anywhere be discerned. In the pleural cavities there was a small quantity of straw-coloured serum. The heart contained dark fluid blood: its parietes were tolerably firm. The foramen ovale was closed by its diaphanous valvular membrane. The ductus arteriosus remained pervious. *Abdomen.* Upon laying back its parietes, the liver and spleen concealed from view every other viscus, filling almost the entire abdominal cavity. The peritoneum was natural. The stomach was considerably distended with gas: its peritoneal surface presented numerous lengthened livid spots of extravasated blood, from one to three or four lines in width, partially encircling the viscus, and more abundant and larger towards the cardiac extremity. The intestines—particularly the small intestines (which throughout were of a pink hue)—presented externally dark spots of extravasated blood. The stomach contained three or four ounces of dark-coloured sanguineous fluid, with one or two black coagula floating in it. Its mucous coat was sufficiently firm: it was of a bright rose-colour, from the evident engorgement of minute capillaries, and was quite dark in some places. The ecchymosed spots existed in its thickness, and beneath it. The small intestines contained a considerable quantity of thick bloody mucus, having a slimy aspect and feel. The mucous membrane of the small intestines was considerably softened in some places. The mesenteric glands were enlarged and of a rose-colour. In colour and consistence the liver was natural, though somewhat congested. The gall-bladder was of a very light colour, and comparatively empty. The spleen was natural in colour and consistence; but *somewhat exceeded the average size* and weight of the adult organ.

PATHOLOGY OF DIABETES.

We reprint the following from the 2nd vol. of the *Transactions of the American Medical Association*, pp. 89. "For all practical purposes, in the present state of our knowledge, we may, in the opinion of Dr. Todd, adopt with advantage the following view of the pathology of Diabetes. 'That it is primarily a disease of the mucous membrane of the stomach, whereby an abnormal diastase is formed, which readily converts into sugar such aliments as admit of that conversion; the mucous membrane probably likewise secretes sugar; the sugar thus formed, passes into the blood, and is rapidly eliminated by the kidneys, causing, at the same time, the attraction to those organs of the elements of a large quantity of water.'"

"Very much to the same point are some interesting remarks of Professor Flint, in a late number of his journal *(Prov. Med. and Surg. J.)*, on the pathology and treatment of this affection. 'The presence of sugar in the blood and various secretions other than the urine,' he remarks, 'renders it inappropriate longer to rank diabetes among renal diseases. It is a disease affecting the assimilatory process, in consequence of which, sugar ingested passes unchanged into the blood-vessels, and alimentary principles capable of being converted into sugar undergo that chemical change. The kidneys are involved only as one of the excretory outlets by which this useless saccharine material is eliminated from the system. The hyper-secretory action of the kidneys, (which is probably due to the presence of sugar acting as an excitement,) constitutes an important element of the disease. This will serve to explain, in part, the dryness of the surface, the costiveness, the thirst, &c. The loss of those alimentary principles which contain sugar, or are capable of conversion into sugar, for all purposes of healthy assimilation, will explain the debility, the wasting, and the great gravity of the disease. We have thus advanced a considerable way in our knowledge of this disease; but we are still at a distance from knowledge of the nature of the perversion which the processes of assimilation undergo, and of the ulterior morbid condition upon which the perversion depends. In other words, its true pathology and etiology are still unknown. The knowledge, however, which has been acquired, is not without its practical value.

It prevents, in the first place, treatment based upon the idea of its being essentially a urinary disorder, and other false pathological views, and in this way saves the patient from measures which might prove not only useless, but injurious. This, although negative, is nevertheless not the least important of the advantages which attend an improved knowledge of diseases generally. . . . . Our rational course, in the present state of knowledge, is to endeavour to restore the proper action of all the functions; and especially to modify and improve the processes of assimilation."

M. Mialhe believes that diabetes "depends upon a want of sufficient alkalinity in the fluids of the body; that the transformation of amyloid substances into sugar, is not peculiar to diabetic patients; it is not an accidental phenomenon, but a necessary part of the digestion and assimilation of food; that this is brought about by an animal *diastase* in the saliva, which he has discovered; that amyloid substances must in all animals, without exception, be converted into sugar under the influence of this diastase. *But what becomes of this sugar?* It must participate in nutrition, and, in order to do this, it undergoes certain transformations; for in the normal state, it is not detected in any of the secretions. Its passage through the kidneys is pathological, and depends upon a disturbance which has its origin in a want of alkalinity in the blood. The alkalies in the blood, M. Mialhe contends, are the principal agents in the digestion and assimilation of saccharine and amyloid substances. The saccharine principle must undergo farther transformations to be assimilable. In the healthy subject, the alkalinity of the blood is sufficient for this decomposition; but if this be deficient, the transformation fails to take place; the sugar becomes a foreign body, and is cast off, not only by the kidneys, but by all secreting surfaces, and *we have diabetes.* The cause of this affection may therefore be traced to a defective assimilation of the sugar, through a want of alkalinity in the animal economy. Human blood is naturally alkaline, but would eventually become acid, through the ingesta, but for the counterbalancing effects of especial secretions—the urine and the perspiration, which when normal, are always acid. The saliva and the tears are uniformly alkaline."

PLANTAIN AS A REMEDY IN INTERMITTENT FEVERS.

Dr. Chevreuse, of Charmes-sur-Moselle, relates the following case:

A lady, aged 56, had for some time had attacks of tertian ague, coming on about ten o'clock in the morning, and not leaving her till the night or the next morning. The sweats were very profuse. When Dr. Chevreuse first saw her, which was not until she had been treated without effect by leeches and cupping, he ordered an enema of sulphate of quinine to be given five or six hours before the first stage of the fever. Thirty-five *centigrammes* (about 5½ grains) were given, but they only produced pains in the intestines, and dryness in the throat. The dose was afterwards raised to sixty and then to seventy *centigrammes*, without producing any change. Fifty *centigrammes* were then given by mouth; and subsequently inunction of quinine as well as other means were tried, but all without success. After the patient had suffered for four months, and was growing thin and losing strength, some of the juice of plantain leaves *(plantago major)* was administered to her. She took about a quarter of a wine glassful before the rigor. The first dose purged her, and increased the fever, which continued this time longer than usual; but after the second dose, which was given in the same manner, the fever did not reappear, and there merely remained some weakness, which gradually disappeared.

Dr. Chevreuse states that, in many cases, plantain-juice had cut short paroxysms of fever, which had resisted sulphate of quinine. [*Revue Médico-Chirurgicale*, as quoted in *Journal des Connaissances Médico-Chirurgicales*, March 1, 1851.

TREATMENT OF ERYSIPELAS BY THE TINCTURE OF THE MURIATE OF IRON.

Drs. Hamilton Bell and Charles Bell have (in the *Edinburgh Monthly Journal* for June 1851) directed attention to their successful treatment of erysipelas by this preparation of iron.[1] The first object is to have the bowels freely opened. If the erysipelas be mild, fifteen minims of the tincture are administered in water every two hours, till the disease is completely removed. When the attack threatens to be more severe, the dose is increased to twenty-five minims every two hours, and persevered in night and day, however high the fever and delirium. The only local applications ever found necessary, are hair-powder and cotton-wadding. While the chalybeate is trusted to for the removal of the disease, it is necessary that the bowels should be attended to. In podagral erysipelas, the tincture of the muriate of iron has been found equally valuable as in other cases.

Dr. Hamilton Bell thus explains the rationale of the treatment :—"In inflammation, the capillary vessels having apparently lost the power of separating or electing the component parts of the blood which are necessary for functional purposes, and having become, to a certain extent, inert tubes, a stream of blood is admitted, for the circulation of which they are not calculated. In other words, I consider, that in erysipelas, the capillary vessels are in an atonic state."

This hypothesis appears to Dr. H. Bell to be supported by the effect of the treatment which he has adopted in erysipelas,—the cases, he thinks, demonstrating that when an extensive portion of the surface of the body is violently inflamed, producing a high degree of fever and cerebral excitement, the symptoms subside, when the system "is rapidly surcharged with, or brought under the influence of the muriated tincture of iron."

SURGERY.

ESCAPE OF PUS FROM THE PUNCTA LACHRYMALIA: NO LACHRYMAL TUMOUR.

M. Béraud exhibited to the Society of Biology, in Paris, in March 29, a specimen taken from a male subject, about 50 years old. The puncta lachrymalia and ducts were perfectly healthy. There was no valve at their common orifice in the lachrymal sac, such as are present in two-thirds of the cases which he had examined. The lachrymal sac contained a small quantity of puriform matter; it was narrowed in every direction, especially on the left side, where it was reduced to one-half its size. The surface was covered with small openings, the orifices of the glands contained in the sac. There was no valve at the lower orifice of the sac, either on the right side or on the left; according to M. Béraud, it should be present in about half the cases. The nasal canal on both sides was completely obliterated by the mucous membrane of the duct. The lower orifice of the meatus could not be seen. There was no lachrymal tumour or fistula, in spite of the complete obliteration, and of the absence of valves, to which structures M. Béraud attributes a considerable part in the formation of these affections of the lachrymal passages. [*Gazette Médicale de Paris*, May 31, 1851.]

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[1] Ferri Muriatis Tinctura. *Edin. Pharm.* 1841, p. 104. "Take of red oxide of iron, six ounces; muriatic acid (commercial), one pint; rectified spirit, three pints. Add the oxide to the acid in a glass vessel: digest with a gentle heat, and occasional agitation for a day, or till most of the oxide be dissolved: then add the spirit, and filter."

TREATMENT OF INCURVATION OF THE NAILS.

Mr. H. E. Davidson, in the Boston (U.S.) *Medical and Surgical Journal*, says :—The mode that I have employed, and with the most complete success, for the relief of this difficulty, is the following. A piece of a very light watch spring, of sufficient length to extend across the nail from one edge to the other, is turned into short hooks at the extremities. Two plates of silver, sufficiently thin to be easily pliable in the fingers, are to be cut of an oblong shape, say from one quarter to one-sixth of an inch in width by one-third to two-thirds of an inch in length, with rounded corners, and one end punched with a hole of sufficient size to admit the hooked extremity of the steel spring. The nail should be permitted to attain sufficient length to allow the hooks (which are to be made of the above-described strips of silver) to be insinuated under its edges ; the hooked extremities of the spring are then to be passed into the eyes of the hooks, its centre resting upon the centre of the nail. The spring should not be too stiff, or it will elevate the edges of the nail with too much force, and occasion a painful tension of the soft parts attached to it. The more rapid expansion of the nail will be promoted by enveloping the parts in a wet roller. Where the matrix of the nail, and the nail itself, are sound and healthy, I believe that this method will never fail speedily to restore the nail to its normal condition.

A METHOD OF VACCINATING.

Mr. Edward Crosse makes the following suggestion in the *Lancet*. " I know not whether the following mode of vaccination has been before practised ; if not, perhaps you will favour me by its insertion. It consists in forming a blister, by means of a piece of emplastrum lyttæ, the size of a small pin's head, retained on the arm by adhesive plaster sufficiently long to raise the blister, detaching the cuticle with a lancet, and applying the vaccine virus to the raw surface."

" The struggles of a strong child having prevented inoculation by the ordinary methods, I adopted this plan with success. It was rapidly performed while the child slept. A fairer surface for absorption is presented. And this little operation, insignificant in its execution, though important in its results, is much facilitated, and rendered more certain of success."

CICATRISATION PROMOTED BY OAK BARK.

M. Grusell has lately intimated to the French Academy of Sciences, that charpie suspended in a decoction of oak bark for some days and then dried, forms an admirable dressing after the excision of cancerous tumours, as it preserves the simple condition of the wound, and obtains rapid cicatrisation.

GONORRHŒA IN THE FEMALE TREATED BY INJECTIONS OF URINE CHARGED WITH CUBEBS.

M. Hardy, in a paper recently communicated to the Hospital Medical Society of Paris, announces that he has treated with success a great number of cases of gonorrhœa in the female, by administering cubebs internally, and then employing, as a vaginal injection, the patient's urine. He begins with four grammes daily, and increases the quantity by two grammes daily, till he reaches ten grammes. The urine is injected as soon as it is passed. In three or four days, the mucous membrane assumes its natural appearance, and the discharge ceases ; but it reappears if the injections be discontinued. To confirm the cure, it is necessary to cauterise the mucous membrane of the vagina in eight days with a solution of nitrate of silver. In general, three cauterisations complete the cure. [We cannot help suspecting that the use of the caustic lotion is the best part of the treatment ; and that it might be made to supersede the preliminary proceeding in the majority of cases.]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 22, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Application of the Heat of Electricity in Practical Surgery. By John Marshall, Esq., F.R.C.S. Eng. The author narrated a case of fistulous perforation of the right cheek, in a strumous man, twenty-five years old. A fine platinum wire, 1-50th of an inch thick, was passed through the fistula, so that its ends could be connected with the poles of a Groves' battery, consisting of four cells, each having a platinum surface of thirty-two square inches, and a zinc surface of thirty-eight square inches. The galvanic current was kept up for nine seconds; but little pain was felt from the action of the heated wire; sloughs appeared at both orifices of the fistula; that on the inner orifice came away on the fifth day after the operation; the outer one was separated on the sixth day. On the eighth day, the inner opening was closed; on the eleventh, the outer opening was also closed. A smaller sinus was discovered some days afterwards on the inner surface of the cheek; and by a repetition of the operation, was also cured within a fortnight. Mr. Marshall had employed the *electric cautery* in rectal fistulæ and in internal and external hæmorrhoids, with success. He anticipated that its employment will occasionally be found more advantageous than the knife, scissors, or ligature.

Benefit derived from the Inhalation of Chloroform in a case of Pulmonary Consumption. By T. Spencer Wells, F.R.C.S. Great alleviation of the cough and sufferings were obtained, without any ill effects.

Inhalation of Chloroform; its Anæsthetic Effects, and Practical Cases. By Robert Dunn, Esq., M.R.C.S. After stating the generally admitted threefold division of the nervous system into—*first*, the physical, or excito-motory and reflex; *second*, the nutritive and secretory, or ganglionic; and *third*, the sentient, psychical, and voluntary, or cerebro-spinal system, Mr. Dunn maintained that there is no point in physiology more clearly made out, than that the great hemispherical ganglia are exclusively the seat of perception and its associate, memory—the centre of intellectual action, and of all the operations of thought—"the sole receptacle", in the language of Cuvier, where sensations become perceived and consummated", formed into ideas by their ganglionic action, and where the will exerts its power; but that they are neither the seat of sensation nor of motion. Sensation has its seat in the sensorium commune, or collection of sensory ganglia; and the motor power, in the corpore striata and anterior segmental ganglia of the spinal cord. Sensation and perception ought not to be confounded; they are perfectly distinct, and have their seats in different nervous centres. The former is effected through the direct agency of the sensory ganglia; the latter is mental, and exclusively cerebral. The mechanism (so to speak) of their action is different. While, in sensation, it is direct and single, each sensory ganglion responding directly to the stimulus received, or impression made on its ganglionic centre; in perception, a double ganglionic action is involved. The various sensations or impressions of the sensory ganglia, as the first step in the process, are transmitted through commissural connexions to the hemispherical ganglia; and there, as the second step, become converted, by the ganglionic action of the cerebrum, into ideas, which furnish incentives to intellectual action, and materials for thought. The corpora striata, thalami optici, and corpora quadrigemina, are distinct cephalic ganglia, each exercising a different function; and they, with the nervous centres of the

special senses and the cranio-spinal axis, constitute the nervous apparatus of automatic life. The thalami optici and posterior segmental ganglia of the spinal cord are the great centres of tactile and common sensation ; the corpora quadrigemina are not simply the ganglionic centres of vision, but also of simple emotional impulses, readily excited into action by sight, and independently of the cerebrum. The sensory ganglia are the seat of the emotional feelings, or, in other words, of the feelings of pleasure and pain associated with the emotional states ; but, with Dr. Carpenter, Mr. Dunn thought that the true emotions, like the moral feelings and the animal propensities, are of a composite nature, involving an intellectual element, in all of which, the feelings are of sensorial, and the ideas of cerebral, origin.

What are the feelings experienced, and the phenomena observed, during the slow and gradual inhalation of the vapour of chloroform ? After giving the different degrees of narcotism noted by Dr. Snow, and the quantities of chloroform required to induce them, Mr. Dunn traced the order and sequence of the effects of the inhalation upon the different nervous centres. The sensory and motor ganglia are the first to come under its influence. Sensation is suspended, and immunity from pain secured, while some degree of intellectual consciousness is still persistent. The function of the cerebrum, in the centre of intellectual action, is the next arrested, and coma supervenes—a total abolition of consciousness, reducing life to a series of automatic movements ; after this, the medulla oblongata and true spinal centres become involved. The ganglionic system is the last to be implicated ; but, with the arrest of the peristaltic action of the heart, life ceases.

What conditions are necessary to secure uniformity of effect, and safety to the patient ? These are, that the chloroform be pure, and that the mode of inhalation be slow and regular, with a proper dilution of atmospheric air. There is not a single fatal case upon record, where these conditions have been rigidly observed. The eye of the administrator ought never to be off the face of the patient. Chloroform destroys life as certainly as carbonic acid, if respired until the excito-motory and ganglionic systems come fully under its dominion. In the succession of effects, during its slow and gradual inhalation, the ganglionic system is the last to become involved, and the contractions of the heart the last of the vital actions to be arrested ; but the order is reversed when the lungs have been suddenly overcharged with the undiluted vapour, and the patient may die from the direct effects of the chloroform upon the heart, before insensibility has been produced, and the nervous centres of the encephalon affected. As the inhaled chloroform is again eliminated from the blood, and passes off unchanged by the lungs from the body, it may be fairly inferred, that it acts in its integrity, and not by its separate elements, upon the vesicular matter of the nervous centres ; and that beyond the direct and immediate effects produced by its presence in the blood upon these centres, no lasting ulterior or injurious effects can reasonably be expected to result from its use.

Its range as a therapeutical agent is in consequence limited, and its effects often transient ; but present relief from pain is a boon to the sufferer, and its modus operandi in regard to the different nervous centres points plainly to the class of medical cases in which it has been found to afford relief ; viz. neuralgia, spasmodic asthma, delirium tremens, hysteria, hysterical and puerperal, and some other forms of mania,—certain convulsive and spasmodic affections,—puerperal convulsions, chorea, epilepsy, and tetanus. Still, it is chiefly, if not entirely, in the great majority of cases, as an ancillary to the adoption of more efficient curative measures, that we can view it in the light of a therapeutical remedy.

The use of chloroform in midwifery has given rise to much discussion. Its effects must be studied in their relation to the physiology of parturition. In the sequence of effects from the inhalation of chloroform, as the spinal and ganglionic systems, on which the parturient act essentially depends, are the

last to come under its dominion, we run no risk of seriously interfering with or of arresting their action, if we use common prudence in its administration. In cases of excessive motor action, with a rigid and unyielding condition of the os uteri, passages, and outlet, the advantages of anæsthesia are great. In instrumental midwifery, and in cases of turning, when the patient is nervous, restless, or unmanageable, it presents a valuable auxiliary. The fact, that immunity from pain may be secured without the suspension of intellectual consciousness, ought never to be forgotten in obstetric practice.

Dr. Sutherland mentioned that he had advantageously employed chloroform in two cases of epilepsy, in which the "aura epileptica" was present. In one, the fits were suspended for two years; in the other, for not quite so long a period. He had employed it also in some cases of insanity in St. Luke's Hospital, in which it acted as a temporary sedative, but not as a curative agent. He had, however, seen three cases of puerperal mania resulting from the use of chloroform administered during pregnancy. One of these cases occurred in a lady whose epileptic fits had been suspended by chloroform; in the absence of the nurse she had inhaled a great quantity of the agent, and mania was the result. In another case, he had himself administered the agent; and in the third instance, he had received a letter from the gentleman who had attended the case, in which it was stated that the mania came on after the use of the chloroform.

Dr. Copland, after speaking of the great interest of the paper, said, that we should not employ chloroform in organic diseases of the heart, nor in cases of neuralgia, where there was any reason to suspect that there was disease of the nervous centres. He was surprised that no notice had been taken of the effects of chloroform on the lungs themselves. The gist of the first paper was to show the usefulness of this agent in some spasmodic affections of the air-passages. In some cases, however, it might be injurious. In some cases in which chloroform had been used and the patients had died, symptoms of congestive pneumonia had presented themselves, which were regarded as the effects of chloroform, rather than of the operation to which the patients had been subjected. In some cases in which he had been consulted respecting the inhalation of chloroform in operations upon the teeth, he had generally objected to it; for he had seen two cases of congestive pneumonia from that cause, in one of which cases the patient did not fully recover from the disease under six months. It was most desirable not to use chloroform in cases where there was a tendency to lung disease; and this caution held especially good in early phthisis, in which there was usually a tendency to congestive inflammation.

Tuesday, May 13, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Fatty Degeneration of the Placenta, and its influence as a cause of Abortion, Death of the Fœtus, Hæmorrhage, and Premature Labour. By Robert Barnes, M.D. Lond. The author related two cases of delivery at the seventh month. In the first, flooding occurred twice without obvious cause, and unaccompanied by pain, at the third month; and again at the seventh month, when labour followed. In the second case, there was no hæmorrhage previous to delivery. In both cases, death of the child occurred some time previous to delivery. In both cases, the placenta was studded with fatty masses, apparently isolated from the surrounding structure. These masses were firm, yellowish-white, and bloodless. The diseased and apparently healthy portions of the placenta were continuous; and the fatty masses were the result of fatty deposit or degeneration in the proper placental structure. In one case, branches of the umbilical vessels, in an atrophied condition, were traced through several of the fatty masses. In the examination of the minute structure of the altered parts, the author had availed himself of the assistance of Dr. Hassall.

The following conclusions have been arrived at:—The placental villi were thickly studded with innumerable minute spherules of oil. The chorion was much altered; thickened, destitute of nuclei, of a yellow colour, and more or less broken and detached from the vessels. The umbilical capillaries no longer presented nuclei in their walls, these being replaced by spherules of oil. The spherules of oil were contained, some in the chorion, others in the walls of the blood-vessels, many in the intervals or spaces between these. The cavities of the vessels were almost exclusively free from fatty deposition. The vessels were destitute of blood. In some parts, the process had extended to complete disintegration of the original structure. In parts which, to the naked eye, appeared healthy, evidences of fatty deposit and degeneration were observed. A number of specimens of sound placentæ had been examined, and the occurrence of a certain proportion of oil as a normal constituent had been determined. With the exception of a case of fatty degeneration of the placenta, recorded by Professor Kilian, and of which an abstract appeared in the *British and Foreign Medico-Chirurgical Review*, for January, 1851, p. 272, no distinct recognition of the nature of the affection is to be met with. The author thinks that this change of structure promises to throw light on the disputed question of hereditary transmission of predisposition to fatty degeneration. It shows also how rapidly such a change of living structures may take place. The conversion of portions of placenta into solid unyielding structure, and the consequent imperfect attachment of these portions, and of the surrounding healthy structure, to the womb, giving rise to hæmorrhage, and premature labour, may occur possibly during the life of the child. A more frequent occurrence probably is the destruction of the fœtus, in consequence of imperfect nutrition, and by a process of slow asphyxia. Fatty degeneration may also cause abortion in the early periods. With reference to treatment, it was suggested, whether the disposition to this destructive change, if known and established by the observation of preceding pregnancies, might not warrant the induction of premature labour, with the view of anticipating the period at which the fœtus would almost certainly be destroyed if left in the womb. Some suggestions were also offered with reference to the general treatment to be adopted with a view of counteracting the disposition to fatty degeneration before and during pregnancy.

Dr. R. Quain said that fatty *deposition* and fatty *degeneration* were processes entirely distinct in their nature and their effects. The deposition of fat from the blood led to the formation of adipose tissue; fatty degeneration, on the other hand, was a result of the disintegration of albumen and fibrin, and of the tissues into the formation of which they entered. There was here no adipose tissue, but a mere aggregation of granular particles. This disintegration may be witnessed in the formation of adipocire, or it may be made to occur experimentally in dead flesh, and the changes could be then followed by the microscope. It may be observed in various albuminous, fibrinous, and other products in the living body, but beyond the sphere of vascular action, and also in various tissues, the nutrition of which had been modified by inflammation, or obstruction to the blood-vessels. The disease of the placenta under discussion was due to some analogous condition, to inflammatory action, or to some modification of the circulating and nutritive apparatus of the organ, by which the albuminous or fibrinous elements of the blood were retained in the blood-vessels, or extravasated, and then subjected to the process referred to. We were acquainted with a tough, leathery state of the placenta, with calcification of the organ; and the origin of these conditions was to be explained in the same way. It was only by tracing these morbid conditions to the primary lesion which produced them, that we could hope to discover the means by which their recurrence could be prevented.

Dr. C. J. B. Williams said that the whole topic of fatty degeneration

was one of growing importance, not only as constituting a serious lesion in itself, but also as forming a remarkable element, of very common occurrence, in several other morbid processes, in cachectic states. He thought that Dr. Barnes had clearly established the existence of fatty degeneration of the placenta in the cases narrated; but he could not admit it to be probable that this was the primary lesion, or one against which practical measures, to prevent abortion, could be profitably directed. The author had too much regarded fatty degeneration as an independent and original vital process, like that causing hypertrophy, or malignant disease, instead of being, as it truly is, a chemical transmutation of fibrinous or albuminous deposits or textures, consequent on a failure of that degree of the nutritive process necessary to maintain a higher order of structure. One of the earliest observers who had set this matter in its true light was Mr. Gulliver, who, in his paper on the "Atheroma of Arteries", published in the Society's *Transactions*, and subsequently in his editions of Gerber and Hewson, had made known many examples of fatty degeneration of deposits and textures, and had suggested the probability that the change is chiefly chemical. About the same time, he (Dr. Williams) had compared this fatty transmutation in the living body to the conversion of dead flesh into adipocire; and had cited numerous instances, in which the products of inflammation and obstructed natural tissues undergo more or less of a similar change during life. The later researches of his friend Dr. R. Quain seemed to him (Dr. Williams) to have completely established this view, and to have further traced many of the modes in which impeded nutrition promoted the degradation of the natural tissues into molecular fat.[1] It seemed to him (Dr. Williams), that it might now be received as a general law, that whenever tissues or deposits are imperfectly supplied with blood, yet are sufficiently nourished to keep them from becoming dry or decomposed, there will be found the process of fatty transformation, more or less resembling the same change which takes place out of the body. Thus, imperfectly-organized lymph in the pleura, pericardium, or peritonæum; lymph in the texture of the lung or of cellular membrane; fibrinous clots in vessels; blood-clots in the brain; soft, recent enlargements of complex organs, as of the liver, kidneys, testicle; crude tuberculous masses, and torpid growths, non-malignant and malignant, had been repeatedly found by him (Dr. Williams) to afford, under the miscroscope, the clearest evidence of falling under this law. This law is, in fact, a most satisfactory clue to much that has been hitherto obscure in pathology, and unravels much of the mystery of the processes of softening of tissues, maturation of abscesses and tubercles, the breaking down of consolidated masses in spongy organs, and the weakening and wasting of muscular and glandular structures. But this view would teach us to look beyond the mere fatty degeneration itself to the impaired or obstructed circulation, and sometimes altered condition, of blood, which was its cause; and, as in the case of the fatty portions of the placenta, of which they had been hearing, it must often remain a question whether the degeneration was not *rather the consequence, than the cause.*

Mr. Streeter hoped the monograph just read would be published in the *Transactions*, where no disease of the placenta, except Dr. R. Lee's case of adhesion to the scalp, had as yet been recorded.

Dr. Robert Lee endeavoured to throw doubt upon the existence of fatty degeneration of the placenta.

Dr. Barnes had not been convinced of the necessity of the distinction Dr. R. Quain had drawn between fatty deposition and degeneration. He felt great diffidence in dissenting from the explanation of these cases given by Dr. Williams; but he could not admit that the fatty degeneration was the result of the death of the fœtus, or of previous disease in the placenta.

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[1] London Journal of Medicine, July 1850, p. 705.

The history of the cases, and the development which the fœtus had in both instances attained, convinced him that the fatty degeneration was the cause of the death of the fœtus; and no evidence of any other disease or morbid deposit was detected in the placentæ. The affection had been traced in the apparently healthy portions as well as in those more obviously altered, through every stage, from simple deposition on the walls of the umbilical vessels, their investing chorion, and the other normal tissues of the placenta, to actual degeneration and disintegration. Dr. Barnes referred to a specimen which had come into his possession, in which the affection presented itself under a different phase; and in which undoubtedly fatty metamorphosis of the placenta had taken place after the death of the fœtus. He should lay an account of this specimen, which still existed, before the Society on a future occasion.

Tuesday, May 27, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Cases of Unusual Difficulty in the Diagnosis of Pleuritic Effusions. By T. A. Barker, M.D. In the first case, there was extensive emphysema of the left lung, which had encroached greatly on the right side of the chest, pushing the heart and mediastinum beyond the mesial line. The right lung adhered closely to the costal pleura, and was reduced to about a fourth of its usual size: it was exsanguine, and contained no air, resembling a lung compressed by effusion in the pleura. In consequence of these changes, no respiration could be heard in the right lung during life: the right side of the chest was universally dull on percussion, and the patient could only lie on the right side, or sit erect. There were other symptoms closely resembling those of hydrothorax; and the dyspnœa, and symptoms of approaching apnœa, being very urgent, a very fine trocar was introduced into the chest, to ascertain whether there was fluid. No inconvenience resulted; and the symptoms were explained, on *post-mortem* examination, by the state of parts above described. The next case was one in which, without any of the general symptoms of pleuritic effusion, it was discovered that there was no respiration going on in the posterior third of the left lung. In four days the person died; the lungs were healthy, but there was extensive effusion, confined to the back part of the chest by a very narrow line of adhesion, extending from the upper and back part of the chest to the diaphragm, half way between the ribs and the sternum. Three other cases were referred to, in which pleuritic effusion had been limited by adhesions in the same position. Two other cases were shortly alluded to, in which there was considerable emphysema, but respiratory sounds could be heard in every part of the affected side, in consequence of the lung being kept partially in contact with the ribs by numerous adhesions, forming several separate cavities in which the purulent matter was contained.

Case in which a Fibro-Cellular Tumour was removed from the Hand. By S. Solly, Esq., F.R.S. A married woman, aged 49, was admitted under Mr. Solly's care into St. Thomas's Hospital, on February 22, 1851, with a tumour on the palm of the left hand, resembling in shape and appearance a large oblong potatoe, the diameter varying from three to five inches, and attached by a broad pedicle. Some patches of ulceration existed, two or three lines deep, having none of the characters of malignant disease. The surfaces bled easily, and were surrounded by a limited blush of redness. The tumour was elsewhere of a pale colour, with small tortuous veins ramifying on it. It had an elastic feel, much like that of encephaloid disease: in some parts giving the idea of fluid, in others being firmer. There had lately been some increase of pain, but it was not constant, and depended much on position. The health had been but little affected. The tumour encroached on all the fingers, but did not prevent flexion and extension, and a considerable proportion of the skin of the palm remained intact. Much difference of

opinion existed as to whether the disease was or was not malignant. Mr. Solly was inclined to consider it as a species of enchondroma. By a grooved needle, some jelly-like stuff was obtained, containing much granular matter, with many exudation corpuscles, and some few spindle-shaped cells, with here and there a common epithelial cell. Mr. Solly removed the tumour on March 1st, 1851. When examined, it had the appearance of an enchondroma of a soft kind. There was a firm, white, dense matrix, enclosing glairy fluid. No true cartilage could be found. Portions of the tumour were sent to Mr. Quekett and also to Mr. Birkett. Communications from these gentlemen show that they agree as to the non-malignant character of the disease. A careful report of the actual condition of the tumour after removal, drawn up by Dr. J. L. Bristowe also tends to the same conclusion. The wound was of a healthy character, and, on the 19th of March, it is reported to have been only one-fourth of its original size. The swelling and tenderness of the fingers diminished, and the back of the hand regained its natural appearance.

Aneurismal Dilatation of the Posterior Tibial Vein, communicating indirectly with the Popliteal Artery. By Edward Cock, Esq. G. M., aged 28, a tide waiter, was admitted into Guy's Hospital, October 30th, 1850, for a large swelling on the back of his leg, which had come on after a long and severe attack of fever. This swelling had all the indications of being a deep-seated abscess under the gastrocnemii muscles. Eleven years previously, his femoral artery had been tied for secondary hæmorrhage following a wound in the popliteal space. He had perfectly recovered from the accident and the operation, and the only inconvenience he ever experienced was a swelling of the superficial veins of the leg, which took place about two years afterwards, and became permanent. On October 3rd, a puncture was made in the swelling, which gave exit to nearly three ounces of dark, grumous, pitchy blood, which did not coagulate, and had evidently been extravasated for a considerable period. Two days after the puncture had been made, nearly a pint of pus escaped from the wound, to the great relief of the patient, and the abscess continued to discharge and diminish in size during a period of twelve days, the man's health and strength daily improving. On November 14, sudden and alarming hæmorrhage took place, to the extent of nearly three pints. The cavity of the original abscess became distended with blood, and infiltration was rapidly taking place into the tissues of the leg, and through the popliteal space towards the thigh. It was judged expedient to amputate the leg above the knee, after which the man got perfectly well.

Examination of the Amputated Limb. In the popliteal space, corresponding with the original seat of injury eleven years previously, there existed a small sac, into which opened the popliteal artery, and to the walls of which were attached the termination of a fibrous cord, which represented the popliteal vein, obliterated up to the line of amputation. Proceeding from the interior surface of the sac were two vessels; the one being the continuation of the popliteal artery, reduced in size, and passing down to be distributed normally to the leg, and the other, the popliteal vein, permeable, dilated, thickened, pouched, and puckered, which passed down, and divided as usual into the anterior and posterior tibial veins. The former was completely obliterated; the latter immediately terminated in an aneurismal dilatation, about as large as a hen's egg, and was situated under the soleus muscle. An irregular opening in the sac communicated directly with the cavity which had constituted the abscess when the patient first came under observation, and which subsequently, (at the time when the hæmorrhage took place), had become distended with blood, derived from the popliteal artery by means of its communication with the vein. All the deep-seated veins of the leg had evidently been long obliterated, and were occupied by solid coagulum, the blood having been returned through the agency of the superficial veins.

MEDICAL SOCIETY OF LONDON.

SATURDAY, APRIL 26, 1851.

EDWARD W. MURPHY, M.D., PRESIDENT, IN THE CHAIR.

EXHIBITION OF A MAN WHO HAD HIS ABDOMEN LAID OPEN THIRTY YEARS AGO. By THOMAS WAKLEY, ESQ. MR. WAKLEY exhibited the man, W. W., who, he said, had been for more than thirty years an object of interest to surgeons. A few days ago, he applied at the Royal Free Hospital in consequence of hernia on both sides. He was now about 58 years old. About the year 1823, he was a seaman on board the *Minerva*. The crew had captured three whales, and all hands were employed in "fleuching the blubber", with knives used expressly for that purpose. The fleuching-knives are straight, as long as a scythe, and as sharp as a razor. He had turned from his companions to micturate, and when again returning to his work, the deck being slippery, he fell forwards, with the edge of his fleuching-knife turned upwards. The lower part of the abdomen was completely opened from the anterior inferior spinous process of one side, to that of the opposite side. The intestines protruded on the thighs, and the penis was severed from the trunk. Several bleeding arteries were tied; the intestines were carefully replaced within the abdomen; the edges of the wound were brought together, and retained in juxta-position by numerous sutures: a catheter was passed through the incised urethra into the bladder, and kept there for two months. The bowel was not opened at any part, although the peritonæal covering of the intestine is reported to have been grazed. The bladder was not wounded, owing, of course, to its collapsed condition, as the man had just emptied it of its contents. In less than four months, the parts had quite healed, and the man was able to employ himself in the easy work of the service. Mr. Wakley said, that the case was a very instructive one, showing, under favourable circumstances, what nature (assisted by the surgeon) could accomplish. It was also associated with the names of celebrated surgeons deceased. Sir Astley Cooper, Sir Charles Bell, and others, had considered the recovery so remarkable, that they had lectured to their respective surgical classes upon the case. Sir Charles Bell stated that the man must inevitably become ruptured; and his words have now become verified after more than a quarter of a century. He had only become ruptured within the last two months. Mr. Wakley thought the case unique, as one of a recovery and long life after so severe and extensive an injury of the abdomen.

ON VENOUS MURMURS. By DR. OGIER WARD. The author began by mentioning the discovery of the sound by Laennec, who, though he had a suspicion that one kind of murmur resided in the jugular vein, yet he was more disposed to attribute the various murmurs heard in the neck to the arteries, and to the bruit musculaire in the platysma and mastoid muscles. M. Bouillaud, who next took up the subject, having attributed the murmurs solely to the arteries, Dr. Ogier Ward was induced to investigate the subject in 1836; and he established it as an indisputable fact, that the sounds in question were produced by the veins alone, though they were modified by the vicinity of the carotid arteries, as regards the internal jugular veins. These conclusions of the author were afterwards confirmed and extended by Dr. Hope and the Committee of the British Association, with a few unimportant exceptions; and were generally admitted by British physiologists, though the French pathologists still adhered to their former opinion. However, in 1843, M. Aran published an elaborate paper on the subject, and induced his countrymen to yield to him an assent which they had hitherto denied to foreigners. From that time the venous origin of the murmurs has been gradually acknowledged in France, and on the Continent generally. The author described the cause of the sound as being the quicker flow

through the veins of blood of abnormal tenuity ; and the difference in the tone of the murmurs produced by pressure of the vessel, to the formation and acceleration of currents in different directions in the vein below the point of pressure. The difference in the sounds produced by shaking oil or water in a bottle is a familiar illustration of this fact, which has been also established by numerous experiments, from which the following law has been deduced—viz., That the increase in the sound is directly as the velocity, and inversely as the density of the fluid. Whenever, therefore, the density of the blood is reduced below a certain standard,—which, however, varies with the individual,—venous murmur is the consequence. Venous murmurs are of two kinds, continuous and remittent ; the former is heard in solitary veins, as the external jugulars ; the remittent murmur is heard in the venæ comitantes, in which the sound is augmented and remits synchronously with the beat of the artery, which modifies it by its pressure on the vein. The external and internal jugular veins afford the best and readiest examples of the sound, from the current of blood being quicker through them in consequence of their ordinary perpendicular position ; but the sound ceases in the horizontal posture, or if the head be lower than the body. On the other hand, the sound is increased, and its tone rises to what is called the "musical hum", by slight pressure of the stethoscope, by which the rapidity of the venous current is augmented ; and also during inspiration from the influence of the same cause. In examining the murmurs, care must be taken to avoid confounding the remittent venous sound with the intermittent bellows murmur that is often heard in the carotids. All observers, both in this country and on the Continent, except the British Association Committee, concur in confining the existence of venous murmurs to persons of weak constitutions, or suffering from disease or loss of blood. Hence it is met with universally in chlorotic and anæmic subjects, whose blood is deficient in several of its constituents, but especially in red globules.

Dr. Ogier Ward having remarked the frequency of the venous murmur in children, whether anæmic or florid, was induced to make a number of observations upon them, and the result he has obtained is, that *all children, male or female, under seven years of age, exhibit the venous murmur.* In girls it generally continues till after puberty and the establishment of menstruation, whether the person be pale or florid. The author has not been able yet to establish the average period of its cessation, either in boys or girls, but from the frequency of its occurrence in adult young women, he believes that a very slight derangement of the general health is sufficient to produce it in them. The greater proportion of water in the blood both of children and females, is a satisfactory explanation of these facts. There is, however, so great a discrepancy in the analyses of the blood taken from such patients, that no exact limits can be assigned to the variations consistent with the health of the individual, as determined by the presence or absence of the venous murmur. With the exception of children, the existence of venous murmurs offers a pretty sure guide to the diagnosis and treatment of various diseases attended with a change in the condition of the blood. In the adult, the author has never met with a case in which tonic remedies were not useful, especially iron, unless the patient laboured under some form of disease that counteracted its influence. The selection of the preparation of iron best adapted to the case, must be guided by the symptoms.

Saturday, May 3, 1851.

Edward W. Murphy, M.D., President, in the Chair.

On some Fallacies in the Modern Practice of Medicine, more especially Homœopathy, and in estimating the Results of Practice by Imperfect Statistical Inquiry. By Dr. Routh. He would not enter on the subject of the theory of homœopathy, but simply on that of the practice—*i.e.*, the argument of experience. To prove this, homœopaths first dis-

figured the allopathic practice, and then advanced on their side statistical tables well calculated to deceive. In defence of rational practice, Dr. Routh adduced chlorosis as an example, in which the blood-globules and the iron contained in them were deficient. In a healthy person the iron varied from thirty-three to forty-five grains—an appreciable quantity, which infinitesimal doses would not congregate in centuries. In the collection of these data, homœopaths overlooked three considerations : 1st. Differences of locality, whereby type, variety, and amenableness to treatment, were greatly affected, illustrating this point by his experience on visiting the continental hospitals. 2ndly. The constitutional or prevailing diathesis of diseases in the same places might vary. The present type of British disease was adynamic ; twenty years ago it was dynamic ; hence many cases of homœopathic success now. 3rdly. There existed at present a peculiar mental epidemic, as it were, which often tended to effect cures ; a tendency to perversion so powerful as, by its influence on the mind, to assist recovery materially. To this cause he ascribed several instances of cures, and astounding results which he had obtained by coloured water. Here was one secret in homœopathic cures. That such was really the case was proved by the failure of homœopathy in the treatment of animals. The real cases of cure were only those in which, if left to themselves, the animal would have recovered, or where a most severe dietetic regimen was also conjoined. These alleged cures also were anonymous, or came second-hand, reported by non-medical persons. The alleged cures of farcy and glanders in horses, extending, as they did, over two to twenty-eight months' treatment, he believed were either not genuine, or chronic cases, where the disease had worn itself out. The argument from children was only negative. This class of patients was most of all susceptible to dietetic regimen.

Dr. Routh then entered largely on the subject of the general mortality in hospitals. The homœopaths gave a result of 4 to 6 per cent. The allopaths, sometimes as low as 2 per cent., gave a result usually of 7 to 9 per cent. This he illustrated by results from the different hospitals in Europe. Amongst the causes of this disparity he had traced the following :—

1st. Homœopaths excluded in their results the cases brought in moribund. Allopaths did not. He showed, however, a table of the mortality from fever in Belfast, from Dr. Mateer. This exclusion, in an average of eighteen years, diminished the mortality 22 per cent., and in 1821, 127 per cent. If it were so for one disease, what would it be for all ?

2. Were the cases admitted as severe ? Owing to the natural distrust in homœopathy, few severe cases came to them. They went to the allopathic hospitals. He had seen one patient admitted for very slight headache ; cases of intoxication, and vast numbers of hysterical cases, were included. This, by increasing the number of non-fatal diseases, necessarily diminished the per centage of mortality.

3. The numbers used were small ; and he (Dr. R.) showed, from the Irish tables of hospital mortality, that no returns could be depended upon unless above 10,000. It was said 100 well-selected cases gave good results. He believed, however, from experience, that they were only in the direction of truth. Another 100 cases equally well selected might give a direct negative.

4. Another source of fallacy was the different amount of comfort enjoyed by hospital patients. From personal observation he could state, that Fleichmann's Hospital was unsurpassed in this respect by any other hospital he had seen. The students were either none or few in number, and the patients were not tormented by repeated manipulations.

5. The patients were both younger and of a better class. Out of 320 patients seen in that hospital by Dr. Balfour, 280 were under 40, only 22 above. In the published account for Linz, in 1844, out of 555 patients, 478 were under 40. They were of a better class, not the very poor and weakliest. This he had personally remarked, as had also another Fellow of this Society, Dr. Glück.

The effect of youth in arresting the mortality of disease generally was well-exemplified in the army returns, where, out of some 400,000 admissions, the mortality was only in 1 in 56. In the navy, out of 300,000, 1 in 101.

Dr. Routh alluded to the homœopathic returns from *pneumonia*. Homœopaths were fond of quoting Grisolle's 304 cases, with a mortality of 13 per cent. Dr. Sampson had collected 909 from Briquet, Grisolle, the Edinburgh Infirmary, and Skoda, giving a mortality of 23 per cent. In opposition, Fleischmann's cases were quoted—300, with a mortality of 6 per cent; or from a larger collection, including the results of three other hospitals, 970 cases, with a mortality of 43 or 4 per cent. Many of the reasons above given would explain this; some require, however, particular mention,

1st. Pneumonia in Austria is seldom complicated—usually simple idiopathic. This he attributed to the extreme rarity of Bright's disease of the kidney in that country; and in many returns the complicated were usually classed under the head of the fatal complications, and thus escaped notice. The complicated were only distinguished from the idiopathic in the Linz returns. From 1843-6 there were 93 cases of idiopathic; only eight of complicated: proportion, 8 per cent. In Dr. Tessier's 41 cases, the proportion was 14·6 per cent. In 140 he had collected, occurring in the practice of Drs. Taylor, Walshe, and Peacock, 55 per cent. were complicated. This would explain the difference of mortality. The cases of the Glasgow Infirmary, so often quoted by homœopaths, from 1843-45, were mostly all complicated, chiefly typhoid, and many brought in moribund.

2nd. Age was most important in pneumonia. The mortality was high above 40; low below it, excluding children. The army returns gave the mortality out of 12,000 cases as 1 in 29, sometimes as low as 1 in 45; the navy, 1 in 26, sometimes as low as 1 in 59, out of some 3,000 cases. The best homœopathic return was one in 22; Fleischmann's, 1 in 16; and these were simple cases; the others mixed.

3rd. Sex was another most important feature. The distinction was not made by homœopaths. There were 75 males usually seized by pneumonia to 25 females; but the per centage of mortality among females was more than double. Indeed, by comparison in the Registrar-General's Returns for 1843 and 1844, calculating from 8,000 fatal cases, the different numbers of persons living at each age, the per centage mortality to seizure from pneumonia, excluding children, was 100 males to 211 females. In Dr. Tessier's 41 cases, 3 only were females; and if we took Fleischmann's 19 cases, recorded by Dr. Balfour, as a sample of all, the results from the preponderance of males would be 4 per cent.; too favourable.

Dr. Routh then gave an analysis of Tessier's 41 cases. There were 3 deaths; the cases were, 4 only of double pneumonia, 1 fatal; 30 of simple idiopathic single, 1 fatal; 1 secondary and fatal; 5 complicated. Of these 38 successful, 1 died, before leaving the hospital, of phthisis; another, of erysipelas: giving thus a mortality of 1 in 8. In the 38 besides, 6 had been treated also allopathically, and should be excluded; leaving 35 cases, 5 deaths, or 1 in 7. The cases treated allopathically had a shorter duration of treatment, and left the hospital sooner after convalescence. For so many cases of idiopathic, and with so many males, this was high. On the other hand, the analysis of 141 cases in the practice of Drs. Taylor, Walshe, and Peacock, gave 43 deaths: mortality, 1 in 3; but in this number (141) there were 33 cases of idiopathic single pneumonia, 14 idiopathic double, 2 deaths, among males: mortality, 1 in 23; among the females, 5 of idiopathic single, none of double pneumonia: general mortality for idiopathic, 1 in 25. There were 9 cases of simple pleuro-pneumonia among males, and no deaths; giving a mortality of 4 per cent. only. The remaining were complicated: 52 cases, 30 deaths among males, or 1 in 1·7; 26 cases, 12 deaths, among females; mortality, 1 in 2: total, 78 cases, 42 deaths, or 1 in 1·8. In 127 cases the

age was stated; 61 males under 30, 35 above; 17 females under 30, 14 above; or 78 under 30, 49 above.

After some remarks on the inert treatment observed in such cases by the Viennese allopaths, Dr. Routh concluded by giving examples where under divers treatment, the mortality with Laennec, Wolf, Bouillaud, Louis, etc., had been occasionally very low; adducing also the eleven of Grisolle, cured by emollients only. Declining, however, to deduce conclusions from small numbers, he finished by stating, that idiopathic simple pneumonia under 40 was a very benignant disease; instancing the cures effected by drinking cold water only in many of these cases, as recorded by the Belgian Commission, Drs. Moreta and Compagnani, in Italy. The best treatment in these cases appeared from the researches of Dr. Dietl, of Vienna, the allopathic physician to the Wieden hospital, to be simply the dietetic. Dr. Dietl had treated 85 cases of pneumonia by bloodletting, with a mortality of 20·4 per cent.; 106 by tartar-emetic, mortality 20·7 per cent.; and 189 by simple and strict dietetic regimen, mortality only 4·12 per cent. The bleeding often made the pneumonia complicated. The homœopathic returns should be more carefully analysed before credit was given them; he attributed success to the powers of Nature, and the selection of cases; and, perhaps, even amongst rational practitioners, good might result by trusting more to Nature and diet.

Saturday, May 31, 1851,

Edward W. Murphy, M.D., President, in the Chair.

Galvanic Cataplasms of M. Recamier, by E. J. Tilt, M.D. The cataplasms consisted of galvanic piles, each composed of twelve couples. The couple was formed by a riband of zinc and copper; and each couple was separated by a piece of flannel. On the coloured side was cotton wool; on the other, a piece of gutta percha tissue, to insulate the apparatus. The electrical force generated in the apparatus found vent through the copper rings, to which the insulated copper wire could be attached when the energy was required. In some people, the acrid perspiration was sufficient to increase the intensity of the electric action, but more active effects were produced by wetting the flannels with dilute vinegar, or a weak solution of common salt. An unusual sensation of warmth was felt when one of these cataplasms was tightly bound to the skin; a pricking sensation was felt, and the skin becomes red, when two were placed at a distance from each other, but connected by the wire; and a stronger effect was produced when one was placed over the seat of pain and another on the spine. The apparatus might be worn without inconvenience night and day. It had been successfully used by Professor Recamier in cases of chlorosis and amenorrhœa; and he was trying its effect in sterility probably connected with ovarian disease. He has also employed the galvanic cataplasm with success in the treatment of rheumatic and nervous pains, in a case of obstinate constipation, and in asthma; and a patient with angina pectoris was benefited, but not cured.

Treatment of Febrile and other Diseases through the Medium of the Cutaneous Surface. By William Taylor, Esq. The author expounded his views on the treatment of fever, scarlatina, measles, and by lardaceous inunction. Notice has already been drawn to this subject in the London Journal of Medicine, vol. for 1850, pp. 865 and 970.

This being the last night of the Session, the President delivered a suitable valedictory address, in which he urged Fellows to forward their papers early to the Council, as in future suitable papers only are to be brought forward.

MISCELLANEOUS INTELLIGENCE.

THE JENNER MONUMENT COMMITTEE.

In our last number (p. 587) we alluded to the means which were being taken to erect in bronze, in a suitable situation in London, Mr. Calder Marshall's statue of Jenner, the model of which has been placed in the Great Exhibition. We had hinted that the Committee were backward in coming before the public, and that precious time was being lost. We have since received a most satisfactory communication from the Honorary Secretary. We now find that the delay has been unavoidable, and has arisen from a most praiseworthy resolution of the Preliminary Committee, that the benefits of vaccination not having been confined to Great Britain, but having extended to the whole world, the monument of its illustrious discoverer ought not to be a merely national testimonial, but a tribute to his memory *from all nations.* In consequence of this, applications were sent to many eminent men in foreign parts, asking them to be members of committee and receivers of subscriptions in their respective countries; and sufficient time has not yet elapsed to allow of replies being received to all these communications. These answers, however—all of the most gratifying description—are now rapidly coming in, and the names of the Committee, and the methods and plans for receiving contributions will, we understand, be immediately made public.

The total expense of erecting the statue, with its pedestal and *basso relievos*, is estimated at something under £4,000. When we consider the hearty zeal which the very mention of the scheme has already called forth, we are convinced that the amount of subscription will far exceed this sum; indeed, we do not anticipate that less than £20,000 or £30,000 will be collected; and we should certainly have wished that the Committee had announced the object to which the subscriptions are to go, after the £4,000 has been expended on the specific object of the statue. We find, however, that the Committee are by no means so sanguine as ourselves, and that they think it most prudent to confine their exertions for the present to the one definite object of the statue. At the same time, they wish it to be understood that, in the event of our anticipations appearing correct, they will be prepared to take immediate steps to ascertain the opinion of the Subscribers on any plan for the disposal of the surplus which may be suggested. On the whole, we are not disposed to complain of this determination; more especially when, in the event of the subscription list verifying our prediction, it guarantees the very publication we contended for, which, moreover, would certainly be unnecessary, unless the amount collected exceeds the £4000 required for the statue.

We have been gratified with the perusal of many cordial letters of adhesion received from eminent foreigners; and we regret that our limited space will, in this number, enable us to print but a very few of them: but on a future occasion, we propose to lay before the profession more of these interesting documents, including some of the most gratifying character, just received from the United States.

1. *From the* Chevalier John de Carro, M.D., *of Carlsbad, the friend and first disciple of Jenner.*

My dear Sir,—I am highly flattered by your letter of the 19th instant, about Jenner's Monument. You can place my name on any paper by which subscriptions may be raised. I give you here for that purpose my various titles, of which you can insert what you please.

Chevalier John de Carro, *M.D. of the Faculties of Edinburgh, Vienna, and Prague; Physician at Carlsbad, Honorary Citizen of the same town;*

decorated with the Imperial Austrian Golden Cross with the Crown for Civil Merit; Corresponding Member of the Imperial Society of Physicians at Vienna; Actual Member of the Society of the National Museum of Bohemia.

I take the liberty of sending to you the list of the various proofs of what I have done as *friend and first disciple of Jenner.*

Being perfectly sure that the present generation knows but very little of what I did for India half a century ago, you will oblige me very much, in my old days, in submitting these indisputable facts to those who must feel its advantages there, and to whom their author may not have had the good fortune to make himself known. I shall always be happy to hear from you regarding the progress of your grand enterprise; for though an old man, my activity knows no bounds. Dispose of me and of my good will. So busy as I am as a Spa-physician, I shall always find time for answering your letters, and for doing everything in my power.

Believe me, my dear Sir, with the highest regard, your most obedient humble servant, J. DE CARRO, M.D.

Carlsbad, at Sir Walter Scott's, 1st of May, 1851.

To George Vere Irving, Esq., Hon. Sec. pro temp.,
10, *Ampthill Square, London.*

FACTS.

1. I was born at Geneva in the year 1770, and graduated at Edinburgh, on the 24th June, 1793. I began vaccination on the Continent of Europe on the 10th May, 1799, at Vienna, on my two sons, Charles and Peter, both still alive.
2. In the year 1800, I sent, by Lord Minto (formerly Sir Gilbert Elliot), British Envoy at Vienna, whose physician I was, to the Earl of Elgin, British Ambassador at Constantinople, vaccine matter, which succeeded perfectly on his children.
3. This success having caused a great sensation in some parts of the East, I was desired to send vaccine matter to the British Resident at Bagdad. It arrived fluid, and succeeded. A vaccinated child was sent, immediately after the insertion, to Bassora, where the same thing was done, and a vaccinated child sent on to Bombay; from Bombay all over India, to Ceylon, Persia, etc. etc.
4. Jenner, in his *Continuation of Facts and Observations on the Variolæ Vaccinæ*, 1800, p. 5, attests my priority on the Continent of Europe. Drs. Ballhorn and Stromeyer, of Hanover, who followed my example, dedicated *to Dr. Jenner and to me* the account they gave of their first experiments, published at Leipzig, 1801. Friese, of Breslau, and Nowack, of Schmiedeberg, who received from me their vaccine matter and instructions, dedicated *to me alone* the result of their labours, calling me the *first vaccinator on the Continent of Europe*, and the *most active propagator of the vaccine in Germany.* All of them are long ago no more alive.
5. All the attempts made by Dr. Jenner to transplant his preservative to India failed, very likely for want of precaution in keeping it fluid. Every ship sailing to India was supplied with it, but all in vain. In his despair about it, he offered a reward (from his own purse) of £1,000 sterling. I should have been happy to claim it from a sovereign, or from a government, but never from a colleague.
6. Jenner sent me a silver snuff-box, upon which was engraved "*Edward Jenner to Jean de Carro*" for my European and Asiatic propagation; and he did the same honour to Dr. Benjamin Waterhouse, of New Cambridge in America, being the first vaccinator in the New World! When my jubilee for fifty years of doctorate was celebrated here, on the 24th June 1843, my silver snuff-box, containing a lock of Jenner's hair, sent to me by Dr. John Baron, of Gloucester, his friend and biographer, was deposited by me at the National Bohemian Museum of Prague.

7. The diploma of congratulation, sent to me for my jubilee, by the medical faculty of Prague, is addressed to me as : *viro, scientiâ, scriptis æquè ac factis clarissimo ; immortalis Jenneri amico et proto apostolo, cujus de vaccinatione merita vastus resonat orbis ; medicorum Nestori, juvenili solertiâ insigni.*
8. When Sir Arthur Paget, British Envoy at Vienna, who succeeded Lord Minto, and forwarded my correspondence with the East, knew my first success at Bagdad, he announced it to the East India Company in London, a committee of which voted to me, the 20th of March 1804, *two hundred guineas for the purchase of a piece of plate.*
9. Dr. Milne, who had distinguished himself very much at Bushire in Persia, by spreading vaccination, was transferred to Bombay. Having heard from some traveller coming from Vienna, that I was going to be married a second time, he begged leave to offer to my future wife a pair of Cachemere shawls. He desired Mr. Jonathan Duncan, governor of Bombay, to forward them to Vienna ; but His Excellency refused it, saying that he would take the present on himself, adding to the pair of shawls three pieces of beautiful muslin. The present was voted by the *Honourable Governor in Council*, in the most flattering terms.
10. Our late Emperor Francis conferred on me hereditary knighthood, and his diploma confirms all the merits for vaccination.
11. The present Emperor Francis Joseph has conferred lately on me the *golden cross with crown, for civil merit.* The inclosed description, written by one of my colleagues, relates the festivity of my decoration.
12. The Hospodars of Moldavia and Wallachia, Alexander Moronsi and Constantin Ypsilanti, rewarded me, a great many years ago, by valuable presents, for the introduction of vaccination into their principalities.
13. Ludwig I, king of Bavaria, did me the honour to grant to my eldest daughter the honorary canonicate of the Royal Order of Ste. Anna, a decoration only conferred upon regular proofs of nobility.
14. My third son, Edward, had Dr. Edward Jenner as *god-father.*
15. It may here be a matter of interest to know how I sent the vaccine fluid so successfully to Bagdad : I impregnated with it some dry lint (charpie), which I placed between two flat pieces of glass, one of which had a little cavity ; some mucilage joined them hermetically ; they were tied with pack-thread, sealed with red wax, and the whole of it was surrounded with candle-wax, under the form of a middle-sized apple.

N.B. All these notes are completely at the Committee's service, as well as any further correspondence. LE CHEVR. J. DE CARRO, M.D.

Carlsbad, 1 May, 1851.

P.S. I have published : *Histoire de la Vaccination en Turquie, en Grèce et aux Indes orientales.* Vienne, 1804. Dédié à S. E. M. Arthur Paget, Envoyé Brittanique à la Cour de Vienne. Translated into German by F. G. Friese, M.D. Breslaw, 1804 ; with important additions of the author and notes of the translator.

THE JUBILEE[1] of the fiftieth year of the doctorate, celebrated here on 24th June 1843, in honour of the Chevalier John de Carro, the friend and first apostle of the immortal Edward Jenner, occupies the most honourable place in the annals of the Baths of Carlsbad. Yesterday (19th December 1850), the Order of the Golden Cross, with the Crown for Civil Merit, were conferred, most justly, by His Majesty, our august emperor, on the Nestor of the physicians of Bohemia, or rather of the whole empire, and whom we are proud to reckon among our fellow-citizens. This *fête* has caused true joy to

[1] We give above a translation of this inclosed paper, referred to in paragraph 11. In our Number for February 1851, p. 191, we briefly mentioned the honours which had been conferred on Dr. de Carro.

all our good inhabitants, who know all that he has done to add to the celebrity of Carlsbad, and to make it better known in the five parts of the civilised world.

All his colleagues came to conduct him to the place chosen for the decoration, the *Cabinet des Gazettes* in the house of Mühlbad. This solemn march was accompanied by a most brilliant flourish of trumpets. There the ceremony of decoration took place, in the presence of all the authorities of the town and numerous spectators, in the above-named hall, which was decorated with a portrait of our august sovereign, surrounded with garlands.

When the ceremony was ended, our Nestor, who acknowledged that he owed his perfect health to our Naiads, to whom he had devoted his labours for a quarter of a century, was conducted solemnly, and accompanied by all the witnesses of the ceremony of installation to the Golden Fleece (*Maison de l'Etoile d'Or*), where a large banquet was given in his honour by M. J. P. Knoll, burgomaster of Carlsbad. During the dinner, the band of the regiment of Welden, composed of seventy instruments, executed the most brilliant pieces. The guests warmly responded to the toasts, which were most honourable and fitting to this occasion, and the first of which was our august and youthful monarch. Another was in honour of the illustrious chief of the Imperial armies, Marshal Radetzky, and was followed by the most animated *vivats*. The Austrian Hymn was magnificently performed ; and numerous toasts were given and harangues delivered in honour of the hero of the feast. A collection was made by our worthy dean, for some poor families of the place.

Thus passed the *fête*, remarkable for its perfect cordiality, and an evidence how true merit can be recognised and appreciated. DR. MANNL.

II. PROFESSOR OTTO, *of Copenhagen, to* G. V. IRVING, ESQ.

Copenhagen, April the 20th, 1851.

SIR,—I hasten to inform you, that I feel much honoured by being chosen a member of the permanent committee about to be formed for raising subscriptions to erect a monument to Jenner, and consequently can have no objection to my name being placed on the list. If I can be of any service in my country as to the procuring of subscribers, I shall certainly do my utmost ; but I fear that the many sacrifices which the late war has required, will shut the pockets of many who else would be well disposed to open them for that purpose. Hoping to call on you in London in June,

I am, Sir, with many compliments to Mr. Spring,
Your obedient servant, C. OTTO.

III. PROFESSOR SCHRŒDER VAN DER KOLK *to* G. V. IRVING, ESQ.

SIR,—I felt highly honoured and obliged by your most gracious offer of permitting my name to be placed amongst the honourable men who intend to form a permanent committee for the erection of a statue to the immortal Dr. Jenner, to whom mankind is so much obliged, and I accept it with the utmost gratitude. But since I am not informed what are the duties implied on the committee in question, I beg you to make me acquainted with them. Is it your meaning that I should try to collect subscriptions in Holland for the erection of the proposed statue, or do you wish me to be useful for it in any other respect ? If these requirements do not exceed my powers and means, I shall feel highly glad to concur in the universal acknowledgement of the great merits of Dr. Jenner. A few lines from you on this subject would therefore afford me a great pleasure, and in the expectation of this, I remain with the utmost respect, Sir, your most obedient servant,

Utrecht, 10th April, 1851. J. L. C. SCHRŒDER VAN DER KOLK.

iv. *From* Dr. Seoane *of Madrid.*

Madrid, May the 8th, 1851.

To John Conolly, M.D., *Chairman of the Preliminary Committee for raising Subscriptions to erect a Monument to* Jenner.

Sir,—It is with great pleasure I have just received your kind invitation to form part of the permanent committee about to be formed for raising subscriptions to erect a statue to Jenner. I hold in the greatest veneration the memory of this great benefactor of mankind, and I believe with the Committee, that it is the duty of all the nations of the earth to contribute for raising a monument worthy of such a man. I shall have, in consequence, much pleasure in doing everything in my power to promote this idea.

I will receive and put willingly in execution the instructions of the Committee ; and I pray you to send me the letters with the directions you will find below, in order that they may reach me without the retard with which I have received your letter ; and if you have to send me any printed papers, I hope you will be kind enough to send them, with my direction, to the Spanish ambassador, to whom I write to-day with this object.

I am, Sir, your most obedient servant, Mateo Seoane.

P.S. A Don Mateo Seoane, Presidente de la primera Seccion del Consejo de Sanidad. Calle del horno de la mata, Madrid.

v. *Translation of a letter from* Dr. J. Müller *to* Dr. J. Conolly.

Honoured Sir,—I have just returned from a journey to Triest, where I have been staying some weeks this spring, in order to continue some observations which I made there last autumn. My answer to your letter, which arrived here while I was absent, is therefore rather late. I can quite understand the feelings which prompt the English physicians to erect a Memorial to *Jenner*. There is no medical service which can be compared to that which he has rendered, with regard to *universality*. And as its effects spread over the whole human race, it deserves our acknowledgment, that the Committee for the erection of the *Jenner Monument* do not confine the subscriptions to the countrymen of *Jenner*, but rather, that individuals of other nations should assist. With regard to your proposal to add my name to the permanent committee, I can assure you that I with pleasure acquiesce in it, and that I feel myself honoured by that participation. Accept, at the same time, the assurance of my exceeding respect for you. J. Müller.

vi. *Translation of a letter from* Dr. de Lima Leitao, *of Lisbon, to* John Conolly, M.D., *and* George Vere Irving, Esq., *London.*

Gentlemen,—I have had the honour to receive the letter which you have written to me, dated the 11th of this month, by order of the preliminary committee, of which you are the President and Secretary, intended to raise subscriptions for the erection, in a public place in London, of the statue in bronze of Dr. Jenner, after the design of Mr. W. Calder Marshall. You invite me to take part in the permanent committee, which is about to be formed for this object. I am deeply sensible of the honour which the respectable committee has thus shewn me. Persuaded that the great discovery of Dr. Jenner, most glorious for England, has been also extremely beneficial, and will always be so, to the whole civilised world, I think that the Committee is performing an act of universal justice, in permitting the whole civilised world to subscribe to a monument worthy of the man who has bestowed on all the same memorable service, by the discovery of vaccination. You may therefore place my name on the list of the permanent committee ; and I beg you to assure them that I will, according to your desire, do all in my power. Believe me, Gentlemen, with respectful esteem, your very devoted servant,

A. J. de Lima Leitao, M.D.,
Professor of Clinical Medicine in the Medico-Chirurgical School of Lisbon.

Lisbon, April 30, 1851.

VII. *From* DR. MARX *of Goettingen.*

Goettingen, 27 April, 1851.

HONOURED SIR,—The honourable invitation to promote the raising a memorial to Jenner, I accept with thanks.

I have seized every opportunity which has on former occasions offered itself, of manifesting the most perfect esteem for the memory of that noble man, and distinguished physician; as well as for his insufficiently recognized services to suffering humanity. The last opportunity I had of doing this was when his biography by John Baron appeared. I noticed this in our literary pages, and made some additions, which may not be uninteresting to the author, if they should come under his notice. My review is contained in the *Göttingischen Gelehrten Anzeigen*, 1839, pp. 92-115.

The political commotions in my country have of late years almost exclusively occupied time, strength, and resources. It is to be hoped that another lively fellow-feeling will soon be roused.

With the assurance of deep respect, Yours humbly, MARX.

THE HOMŒOPATHIC FELLOWS OF THE EDINBURGH COLLEGE OF PHYSICIANS. The Edinburgh College of Physicians consists of Fellows of two classes; the RESIDENT and the NON-RESIDENT. The former pay a larger fee on admission, and have a seat in the College; the latter have no participation in the government or advantages of the institution, excepting the right to call themselves Fellows; but if they subsequently go to reside in Edinburgh, they must, if called on, pay the difference of fee, and *de facto* join the College. It is rumoured that three gentlemen in the Resident List (though two of them only are actually living in Edinburgh) practise homœopathy, and are cut off from professional intercourse with their brethren, by the Resolutions which we reprinted at p. 588 of last number.

1. DR. WILLIAM HENDERSON, Professor in the University of Edinburgh.
2. DR. WILLIAM MACDONALD, Professor in the University of St. Andrews.
3. DR. RANSFORD, once in practice in Edinburgh; then in Alnwick; and now (since his adopting homœopathy), in York.

Dr. Henderson, early in his career, exhibited some talent, and might eventually have taken a good position in the profession; Dr. Macdonald is better known as a transcendental anatomist, than as a practical physician; Dr. Ransford, though not of note or notoriety in any branch of medical science, was well known to the medical profession in Edinburgh, as the bustling and efficient Treasurer of the College of Physicians.

COLLEGE OF SURGEONS OF EDINBURGH AND HOMŒOPATHY. At a Meeting of this College, held on the 16th of May, the following Resolutions were moved by the President, and unanimously carried. In Scotland, therefore, the homœopathic quacks are now fairly expelled from the ranks of the profession.

1. The College having considered a series of Resolutions, transmitted by the Royal College of Physicians [of Edinburgh] in regard to homœopathy,[1] feel called upon to express their opinion that the system so designated, being entirely inconsistent with the principles professed by candidates for the diploma of the College of Surgeons, any Fellow or Licentiate who practises it, or countenances others in doing so, by meeting them in consultation, will justly incur the disapprobation of the College.

2. That a copy of the above Resolution be transmitted to the Royal College of Physicians.

Signed in name and by authority of the College,

JAMES SYME, *President.*

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[1] LONDON JOURNAL OF MEDICINE for 1851, p. 588.

The New Hospital for Consumption. The foundation stone of the City of London Hospital in the Victoria Park, was laid on Wednesday the 25th June, by His Royal Highness Prince Albert, under the most auspicious circumstances. After the ceremony, a large and distinguished company partook of a splendid déjeuner. The Earl of Carlisle, the Chevalier Bunsen, and the Bishop of Oxford, greatly enlivened the proceedings, by eloquent and interesting speeches. A blessing on the work was invoked by the Bishop of London. On the 11th of June, 1844, His Royal Highness Prince Albert laid the foundation stone of the sister institution at Brompton.

Brompton Hospital for Consumption and Diseases of the Chest. The authorities of this Institution are at present actively engaged in collecting contributions, for the purpose of completing this edifice. A grand military concert and fancy fair, held on the 18th and 19th June, in the gardens of the Royal Hospital, Chelsea, have, after paying all expenses, cleared we believe, about £1,000. It is proposed to have, this season, another fête, with the view of raising a further sum of money for the building fund.

Mesmerism numbers among its votaries, two illustrious northern Professors, viz:—Dr. Gregory, of Edinburgh, and Dr. Macdonald, of St Andrews. Dr. Macdonald has recently been delivering familiar lectures on the nervous system, at the house of Mrs. Holmes, a fashionable mesmerist, residing at 4, Cork Street, Burlington Gardens.

APPOINTMENTS.

Lane, James, Esq., elected Assistant Surgeon to the Lock Hospital, *vice* Henry Lee, Esq.

Lee, Henry, Esq. (formerly Assistant Surgeon), elected Surgeon to the Lock Hospital.

OBITUARY.

Miller, Dr., F.R.C.S.Edin., late of 32, Buccleuch Place, at 11, Arniston Place, Edinburgh, on the 8th June.

Phillips, Thomas, Esq., late member of the Medical Board, Bengal, founder of the Llandovery School, and of several scholarships in St. David's College, Lampeter, to which College he had for many years been a munificent benefactor; at his residence, Brunswick Square, London, in his 91st year.

Rogers, William, Esq., F.R.C.S.Eng., at his residence, on the 6th June, aged 54. He practised at Great Stanmore, and in its vicinity, for the last thirty years. He was much esteemed.

Rowland, Samuel Baker, Esq., poisoned by hydrocyanic acid, aged 33, at his residence, Walham Green, Fulham. Mr. Rowland was the assistant and successor of the late Mr. Rouse, who perished by the same poison. On two occasions, Mr. Rowland was shipwrecked, and made wonderful escapes.

BOOKS RECEIVED.

Balfour (Edward) Statistics of Cholera of the Madras Army, pp. 70. Madras: 1851. Bennett (John Hughes) on the Mesmeric Mania of 1851. *Pamphlet*; pp. 21. Edinburgh: 1851. Carpenter (Wm. B.) Elements of General and Comparative Physiology. *Third Edition.* London: 1851. Catalogue (Alphabetical and Classified) of Medical and Scientific Works. 8vo., pp. 83. London: 1851. Edinburgh Royal Asylum Report for 1850. Edinburgh: 1851. Holmes on the Sunning Hill Wells. London: 1851. Kirkbride (Thomas S.) Report of the Pennsylvania Hospital for the Insane for 1850. pp. 50. Philadelphia: 1851. Lee (Edwin). Nice et son Climat. pp. 132. Paris et Londres: 1851. Nairn Hospital Seventh Report. Nairn: 1851. Nevins (J. Birkbeck). Translation of the New Pharmacopœia, etc. 8vo. London: 1851. Wagstaff (William R.) on Diseases of the Throat, pp. 183. London: 1851. Wilkinson's Anatomy, Physiology, and Surgery. 12mo., pp. 412. Edinburgh: 1851. Wood (Alexander) on Mesmerism. pp. 31. Edinburgh: 1851.

TO CORRESPONDENTS.

Dr. Grigor's letter regarding the Nairn Hospital; and an account of the Brompton Hospital, are unavoidably postponed.

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ORIGINAL COMMUNICATIONS.

ON THE MUSCLES OF THE EYEBALL, AND THE NERVOUS INFLUENCES WHICH REGULATE THEIR ACTIONS.

By HENRY LEE, Esq., F.R.C.S.Eng., Assistant-Surgeon to King's College Hospital, and Surgeon to the Lock Hospital.

Most of the voluntary actions of our bodies are performed by us with reference only to the end which we have in view, while we generally remain unmindful of the mechanism by means of which they are produced; and with respect to the involuntary motions, which are the most important of all, provision is made for their continuance day after day, quite independently of our will, or even of our consciousness. Each muscular fibre employed in the former set of movements is under the influence of, and guided by, common sensation, or what may be termed the muscular sense. This may be appreciated by, and may act in concert with, the will. Thus we are quite conscious of the amount of effort made in endeavouring to raise a weight, although we do not move it. This sense it is which gives us the knowledge of the exact amount of force required in different muscles, in order that they may concur in producing any movement of the body. If this sense is impaired, or ceases to act in conjunction with the will, the muscles act irregularly, imperfectly, or not at all. When, for instance, the nerve of sensation has been paralysed in the head of a horse, the lower lip will hang, and the animal will be unable to eat its food, because it does not *feel* the amount of *effort* required in the several muscles to produce a combined action. Or, again, when a person loses sensation in his lower extremities, although the power of motion is unimpaired, yet will he be unable to walk, because he has no means of knowing or of indicating to each muscle the exact share which it should take in balancing his body. This sense may, however, be supplied by another under certain circumstances. Thus, well-known cases have occurred, in which the power of sensation was lost in the hand or arm, and in which anything placed in the hand would drop, the muscles receiving no intimation of the amount of action required of them. But, in such instances, if the eye were kept fixed on the object, it could be retained

perfectly well in the hand. Hence, the sense of sight supplies the deficiency of the muscular sense. This observation tends to illustrate the way in which the muscles of the eye are regulated in their actions. Unlike other muscles, they have not, or possess in a very imperfect degree, a muscular sense in conjunction with the will; and in this respect their physiological relations are in some degree analogous to those of the involuntary muscles of the body. When the eyes are closed, for instance, we should not know in which direction they looked, were it not that the eyelids occasionally feel the prominent cornea beneath them; or, again, we should in vain require a blind man to fix his eyes upon any given spot; and the evident cause that he cannot do so, is that the sense which governs the muscles of the eye is absent.

The peculiar use of the muscles of the eye in directing it and adapting it to vision, in fact, requires that their actions should be regulated, not by common sensation, but by the sense of sight; and it appears that under these circumstances we remain unconscious of the amount of effort required in any particular action. A local plan of governing the movements of the eye is adopted, which does not depend upon, or communicate with, the general sensorium.

If the finger be placed on the eyelid, so as to feel the convex cornea, we shall become aware of the sudden and rapid motions of the eyeball which are habitually taking place, although generally we have no intimation of them when the eye is closed. In every act of winking, the eye is thrown up to the roof of the orbit, which we should never have known from common sensation, had it not been discovered by other means. In these instances, again, it becomes apparent that the muscles of the eye are not regulated by common sensation; but as the eye is nevertheless guided with the greatest precision in every act of vision, we cannot but ascribe the power which controls their actions to the sense of sight: a point in physiology which has not hitherto been duly acknowledged.

It is probably owing to the absence of the muscular sense in this region, that the means employed for the adaptation of the eye to vision at different distances have so long been made the subject of dispute. Could we be conscious of the effort made in altering the focus of the eye, we should probably be at no loss to ascertain the means by which it is effected; but as the adjustment of the eye takes place under the government of its own nervous influence, and is produced by its own construction, we can only reason upon it, without being able to test our conclusions by our sensations.

The muscles attached to the eyeball are of two kinds, the recti and the obliqui. The *recti* muscles arise from the bottom of the orbit, and run in a straight course over the sides, the upper, and the under surface of the eye. The *obliqui*, in man, have a direction backward and outward as they pass to their insertion; but in many animals, whose eyes are situated laterally, they are nearer the front part of the eye at their insertion than elsewhere; so that although in all animals they have a transverse direction (one passing above, and the other below the globe), yet in some they pass from behind forwards, and in others from before backwards,[1] in reference to the eyeball.

[1] As the position of the eye varies in different animals, the terms anterior and posterior, internal and external, are used in reference to the eye, the cornea being considered the anterior part.

The *recti* perform the office of directing the axis of the eye, turning it to every point in the sphere of vision, and are, as we have seen, under the control of the sense of sight. It frequently happens that one retina is much more sensitive than the other; and under such circumstances, the more feeble impression may be habitually disregarded. The controlling power may then likewise be deficient, and the two eyes may not usually be directed to the same object. A person thus affected will in vain endeavour, by any effort of the will, to direct the wandering eye to any object, as long as the impression of that object remains distinct on the stronger eye, but does so immediately that the more vivid impression is lost. Some individuals become practically aware of the fact, and close the stronger eye in addressing a person situated on the opposite side.

It is necessary for distinct vision, that the impressions on the retina should remain a certain time. If this condition is not complied with, confused images are produced. It is therefore necessary, not only that the eye should be moved from object to object, but that it should be capable of being fixed upon any point upon which the mind is intent. This is equally true, whether the object seen be at rest or in motion, and whether the eye itself be stationary or not. The straight muscles obeying the visual sense are sufficient to direct the eye to any point in the sphere of vision, and to keep it fixed upon such point during the time that the retina is duly impressed; and when the object seen is in motion, the recti muscles are all that is required to make the eye follow it as long as it moves in straight lines. But should it revolve upon its axis, it is obvious that the straight muscles could produce no corresponding motion of the eye. Or, again, if the head is moved in any other but a straight line, the recti muscles have no power of keeping the eye fixed upon an object during the time. In motions of this kind, therefore, in which the relation of the eye to external objects is changed, or when the external object moves in a circle, an apparatus is required by means of which the eye may revolve upon its axis, and so remain fixed with regard to the object seen during the time required for the due impression of the retina. A provision is made for this object in the oblique muscles, which, from their position in different classes of animals, should rather have been denominated "transverse". These embrace the globe of the eye, rotating it on its axis. The action of these muscles cannot be better illustrated than in looking at a carriage wheel in motion. If the eye is allowed passively to rest on the wheel, a confused image is produced, and no part is distinctly seen. But as soon as the separate spokes are observed, the eye is thrown into a series of slight rotatory motions, during each one of which it follows the wheel a sufficient time to see it distinctly. After each such motion, the eye regains its former position, and is again ready to follow the wheel to the same extent as before. Or when we look at an object, and move the head from shoulder to shoulder, the eye is moved in the arc of a circle whose centre is the neck, and the image of the object would be in constant motion upon the retina, were there not a provision for rolling the eye as well as directing its axis. It was formerly supposed, indeed, that the motion of images upon the retina gave the idea of the motion of the objects which produced them. Thus, Keill, in his *Introduction to Natural Philosophy*, p. 79, says:

"Those objects will seem to be moved, whose images are moved upon the retina." More accurate observation, however, shows us, that unless the eye is fixed for a certain, although it may be a very short period, upon an object, there can be no distinct perception of it. The point of sensation, the axis of the eye, and the thing seen, must be maintained, not only in the same straight line, but in their respective relations with regard to position, for a certain time, before a distinct impression can be produced.

The object, as has been observed by Hunter, becomes the fixed point, the centre of motion commanding the direction of the axis of the eye, as the north demands the direction of the magnetic needle; and this relation is maintained during each act of vision, whatever be the motions of the head or of the object at the time. If the head is moved towards the right shoulder, the superior oblique muscle of the right side acts sufficiently to counteract the effect upon the eye until a distinct perception has taken place. The muscle is then relaxed, and again brought into action, so as to allow a succession of distinct visual impressions, as has been illustrated in the example of the carriage wheel. When such a motion, or series of motions, is produced in one eye by the superior oblique, exactly corresponding results take place in the other eye by the action of the inferior oblique. These two muscles consent in their actions as if they were one, and yet we find that they derive their nervous influence from separate sources. Now, as we find every part of the living body fitted by its structure to the exact functions which it has to perform, we cannot doubt that a meaning is contained in this peculiar adaptation, which obtains throughout the whole class of animals that have moveable eyes. What the true interpretation of this particular disposition may be, I will not at present undertake to determine. But I may remark, that as the oblique muscles (taken together) have a double supply of nervous influence, so have they a two-fold office.[1] In all eyes that I have had an opportunity of examining, the oblique muscles embrace the eye, and have evidently the power of compressing it. In the cod and jack and other fish, the oblique muscles have a somewhat different relation to the eye to that which obtains in the human subject. They arise from the anterior and inner part of the orbit, and passing backward and outward, nearly in the transverse diameter of the eye, are inserted with the superior and inferior rectus into the upper and under part of the globe. The recti muscles arise very far back in the orbit, and proceed forward as well as outward to their connexion with the eye. They therefore meet the oblique muscles above described nearly at right angles. In birds, the superior oblique muscle arises from the anterior and inner part of the orbit, passes backward and outward, and expands into a flat triangular muscle, being inserted into the most projecting part of the upper surface of the eyeball. The inferior oblique is smaller, but takes the same direction as the superior oblique, and is inserted in a similar manner into the lower part of the eye. In quad-

[1] Sir C. Bell has with much justice insisted on the consent which obtains between antagonistic muscles, and has shown by direct experiment, that if a muscle contracts its opponent will relax, and *vice versâ*. Two muscles, supplied by different nerves, may thus have a mutual influence upon each other, and concur in performing a double function.

rupeds, the oblique muscles have the same origin and disposition as in man, but, owing to the eyes being situated at the side instead of the front of the head, their mutual relations are somewhat altered. In nearly all animals, they proceed more directly across the globe of the eye than in man.

It may be stated generally, that in those animals in which the socket of the eye is large, as compared with the head, and the eye directed laterally, the superior oblique muscle arises from the margin of the orbit, and proceeds backward and outward, or, in many instances, directly outward to its insertion; whereas in those where the socket is comparatively small, it arises with the recti from the bottom of the orbit, and after passing forward, is reflected through a pulley to its insertion. Whatever diversity there may be in the attachment and disposition of this muscle, it has a distinct nerve appropriated to its sole use in all classes of animals. Had its action been exactly similar to that of the inferior oblique, a branch of the same nerve might have supplied both. The superadded nervous influence implies a superadded function. Now the only action that the oblique muscles can have in all animals, besides that of rolling the eye in its socket, is to compress the eyeball. For although in some animals, from their oblique direction, they might be supposed to influence the direction of the eye, this would not be the case in others. In the swan, for instance, the so-called oblique muscle runs directly across the eye in its transverse diameter. From the observation of the actions of this muscle in man, its use has been assigned, by no ordinary authority, to be that of raising and dragging the eye, in conjunction with the changes to which the other features are subjected "in bodily pain, in agony of mind, and in all this class of passions." But not to mention that there are whole classes of animals in whose features no such expressions ever are recognised, the disposition of this muscle in fishes and birds entirely forbids the idea of any such office being assigned to it.

Although we cannot therefore determine satisfactorily the exact relations of this muscle, yet we infer from what has been said, that it has a twofold action: first, that of rolling the eye; secondly, that of compressing it so as to alter its focal length. But as other explanations equally ingenious have been maintained with reference to the mode in which the eye adapts itself to vision at different distances, we would not here enter upon the discussion, as to whether this effect may not also be produced by other means, but simply observe that the oblique muscles, taken together, have a double function, and a double supply of nervous power. Dr. Hosack, in a paper published in the *Philosophical Transactions* in 1794 (part II, page 222), observed, that external pressure was capable of altering the focal length of the eye, so as to adapt it to vision at different distances. "With a speculum," he says, "I made pressure upon my eye while directing attention to an object twenty yards distant, and saw it distinctly; but endeavouring to look beyond it, everything appeared confused. I then increased the pressure considerably, in consequence of which I was enabled to see objects distinctly at a much nearer than the natural focal distance; for example, I held a book before my eye at the distance of two inches. In the natural state of the eye I could neither distinguish lines nor letters,

but on making pressure with the speculum, I was enabled to distinguish both with ease."

Dr. Porterfield[1] objects to this explanation, that in the jack the oblique muscles "are both situated on the under side of the eye, where they decussate each other in the form a cross", and he therefore argues that the disposition of these muscles is not such as to allow them to compress the globe of the eye. "Had they been so disposed as to embrace the globe in the form of a ring, their contraction might then have squeezed the eye into an oblong form." Having repeatedly dissected the eye of the jack, I am enabled to say positively that the oblique muscles have the very disposition which Dr. Porterfield is here contemplating. His assertion respecting their decussation below the eye, has evidently arisen from mistaking the inferior rectus for one of the oblique muscles.

In all birds, the eye is embraced in like manner, in its transverse diameter, by the two oblique muscles; and when the eye is directed towards the beak, it comes more fully within the grasp of these muscles than at any other time. It is obvious, that in the act of feeding, and using their beaks for other purposes, birds require distinct vision of objects situated very near the eye; and it is equally obvious that rays of light, proceeding from a point near the extremity of the beak, would diverge before they entered the pupil, and would consequently form an image, or come to a focus, at a greater distance behind the lens, than if they had been parallel before they entered the eye. The range of vision in birds, both with regard to near and distant objects, is probably greater than in any other class of animals, and in them, as in fish, the oblique muscles are always well developed. These considerations lead us towards the solution of the question which has been asked for some hundred years past, namely, why the superior oblique muscle has one nerve distributed exclusively to it; and why that nerve, having a separate origin, and giving off no twig or branch, is sent into the orbit where there are already so many nerves? There may be, and probably are, some finer means of adjustment of the eye to vision at different distances within the organ itself, but we cannot but associate the function of this nerve, which is found in all animals that have moveable eyes, with the means by which such adaptation is produced.

Another adjustment of the eyes, which takes place as rapidly as does that of its focal length, occurs in the adaptation of the axis of the eyes to meet upon any object to which attention is directed. Here, again, we have a special action to be provided for, and a special nerve distributed to one of the muscles concerned. It is worthy of remark, that in this case, as in that of the oblique muscles, one muscle only is supplied by the special nerve, although two muscles (the internal and external recti) are equally concerned in the action. As we have a twofold motion to be provided for, (namely, that of the two eyes together, while their axes remain in the same relation to each other, and also that whereby the relation of the axes is altered, as in looking from a distant to a near object), so we have a twofold supply of motive nervous power.

The external rectus is supplied by the sixth nerve, which is almost

[1] PORTERFIELD on the Eye, vol. i, p. 424, *et sequent.*

exclusively distributed to it; and the internal rectus is supplied by the third nerve, which also supplies the other muscles of the eye. We therefore regard the ordinary motions of the eyes, while they act in concert, as under the influence of the third nerve, and their different degrees of divergence and convergence we regard as controlled by the sixth nerve. In every act of vision, therefore, there are no less than three distinct motor nerves employed, each of which conveys its mandate with a rapidity and precision of which we have not the means of forming even an accurate conception.

The muscles connected with the eye are peculiar in having the nerves which supply them with motive energy entirely distinct in their origin and course from those which supply them with sensation; and are also peculiar, as we have seen, in having their actions controlled and regulated rather by the sense of sight, than by the sensation which usually presides over muscular action. This peculiarity of disposition displays to us in a wonderful manner the care that is taken to supply every muscle (and every fibre of a muscle) with nervous influence adapted to its peculiar office. In ordinary muscles, the motive power and sentient or regulating influence are communicated through one nerve; and it is not so easy to trace their mutual relations and dependencies, as when these functions reside in different nerves. And although the mode in which the nervous energy is developed is quite as wonderful in the former case, it is more readily appreciated by us in the latter.

We have seen that in every distinct act of vision, the eyes have not only to be directed to their object, but their focal length has to be precisely adjusted; and that the sensations of the retina are the means by which these actions are governed. The rapidity with which they take place is such, that no one probably, unless directing especial attention to the point, would appreciate the interval which elapses between two distinct impressions as the eye runs over the surface of any object, and receives in succession the reflection of its different parts; and yet, for each such impression the sensation of the precise adaptation required has to be received by the retina, transmitted through the optic nerves, and, reflected again through the nerves of motion distributed to the muscles of the eye. The rapidity of such communications is truly electrical. One of the most striking instances of the rapidity of such communication of sensation, and consequent action of the muscles, is afforded in those instances where gunpowder accidentally explodes in a person's face. The eye takes cognizance of the flash, the information is transmitted to the brain, thence along the facial nerve through a circuitous route in the petrous portion of the temporal bone, to the outside of the face; and the circuit is completed, and the eyelids closed, before a single particle of the powder reaches the surface of the eye.

13, Dover Street, Piccadilly, July 1851.

ON CATAMENIAL DIARRHŒA.

By E. J. TILT, M.D., Senior Physician to the Farringdon General Dispensary and Lying-in Charity, and to the Paddington Free Dispensary for the Diseases of Women and Children.

Our information respecting diarrhœa as connected with the functions of the female generative organs may be expressed in the three following Propositions.

1. The induction of diarrhœa by purgatives often brings on menstruation when it has been temporarily arrested, or when it has been continuously checked, as in chlorosis; and likewise, the induction of diarrhœa by purgatives, whether given intentionally or not, has often determined abortion, or hastened delivery.

2. It is known that severe uterine diseases are often accompanied by constipation, and even more frequently by diarrhœa.

3. We know that in some cases, the cessation of the menstrual function at the change of life, is followed by diarrhœa; and that, guided by this fact, as well as by the experience of former times, one of the illustrious founders of the London Medical Society, Fothergill, justly recommended the use of purgatives to prevent the occurrence, or at least, to diminish the danger of the vexatious diseases to which women are liable at that time of life.

Not finding any mention of catamenial diarrhœa in the writings of Friend, our countryman (the best old writer on menstruation), nor in those of Brierre de Boismont (the best modern author), I concluded that I might be the first to draw the attention of the profession to the frequency of its occurrence; but I now find that some time since Dr. Butler Lane[1] had taken considerable pains to ascertain by a statistical inquiry, the state of the intestinal secretions during the menstrual period, and had arrived at conclusions partly at variance with, and partly confirmatory of my own. The result of his inquiry seems to have passed unnoticed; for in the discussion, which arose out of the paper I had the honour to read before the London Medical Society, it was stated by Dr. Murphy and Dr. H. Bennet, that they were not aware of menstruation being so frequently accompanied by diarrhœa as it was proved by Dr. Lane's researches and my own, while some of the fellows could not admit the truth of such assertions, because they either deemed them unphysiological, or because, according to them, if true, they would have been noticed before. This, therefore, is the state of our information relative to diarrhœa in connection with menstruation: I shall attempt, from this starting point, to attain a more definite knowledge of the subject.

Facts. Having been long engaged in a statistical inquiry into the phenomena of menstruation, I had collected several hundred histories of the menstrual function, when I learnt from a lady, that her bowels were always deranged two or three days before each monthly epoch.

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[1] Lane, Butler, M.D. On Functional Diseases of the Liver associated with Uterine Derangement. London: 1848.

On questioning others in regard to this symptom, I was surprised at finding the first ten make the same statement; however, on continuing my investigation, it appeared that in a great many other women, diarrhœa was not a precursory symptom of menstruation. To prevent any erroneous impression relative to the value of the phenomenon, I shall premise that I have principally derived my information from patients who apply to the public institutions with which I am connected; and that the information obtained does not represent the state of the menstrual function when the patients are attacked by disease, but as it generally occurs at each period of menstruation during health. I have therefore carefully omitted all patients suffering from uterine disease as well as the chlorotic, for reasons which will soon be obvious.

The first object of inquiry is, whether healthy menstruation is accompanied by any intestinal derangement? Doubtless this is often the case, for on adding 100 cases given by Dr Butler Lane, to 349 collected by myself, making a total of 449, the intestinal functions were deranged in 239, and not deranged in 104 cases. This frequency of intestinal derangement is confirmed likewise by some statistical inquiries made by Dr. Ogier Ward.

Admitting that intestinal derangement frequently coincides with menstruation, it remains for us to ascertain the nature of this disturbance. Judging from his 100 cases, Dr. Butler Lane was led to believe that the normal exercise of menstruation generally induced constipation; but this is not confirmed by more numerous inquiries, and as I infer, that the information was not all collected by Dr. B. Lane, it may be admitted, that if some of the women reported to be habitually costive during menstruation, had been asked whether they were likewise so a day or two before that period, they would have answered, as has frequently occurred in my practice, "No, the bowels were more open just before, and by that I knew that the courses were coming."

A general view of a phenomenon can alone give its true value. I shall therefore inquire into the frequency of that catamenial diarrhœa, whether it occur—

I. At the prodroma of menstruation.

II. During its regular establishment, or

III. At its cessation.

I. As a symptom of the prodroma of menstruation, diarrhœa scarcely ever occurs. I have noted it but three times in 349 cases.

II. As a symptom of regularly established menstruation, it occurred in 168 instances out of 349 women carefully interrogated relative to this point. It did not occur in 155 cases.

In those cases in which it did occur, it preceded the menstrual flow in 67 cases, and accompanied it in 75. It both preceded and accompanied it in 21 women, and in three cases it neither preceded nor accompanied it, but on the contrary, for two days habitually followed the menstrual flow. In the cases of precursory diarrhœa, the action of the bowels was generally suspended during menstruation until the cessation of the catamenial period.

The following table will permit the reader to understand the nature of the catamenial disturbance of the intestinal surface.

STATE OF THE BOWELS DURING HEALTHY MENSTRUATION.

Dr. Butler Lane's List	No. of obsv.	Author's 1st List.	No. of observations.	Author's 2nd List.	No. of observations.
		RELAXED.		RELAXED.	
		Before the time ..	45	Before the time ..	22
Bowels		At the time	31	At the time	44
relaxed	33	Before and after ..	10	Before and after ..	11
		After	2	After	1
			88		78
				CONFINED.	
Bowels				Before the time ..	4
confined ..	45	Bowels confined ..	73	At the time	23
				After	1
					28
State of				UNALTERED.	
bowels				Regular as usual ..	77
unaltered ..	22			Confined as usual	2
				Relaxed as usual ..	3
					82
	100		161		188

On adding the totals of my two lists to that of Dr. Butler Lane, 449 observations are obtained, out of which it would at first appear that some kind of intestinal disturbance during menstruation was only absent in 104 instances; but I consider this proportion to be smaller than what is really the case, from the fact of my not having been sufficiently minute in my inquiries of the 73 women referred to in my first list, as having their bowels confined. If I had asked them whether the bowels were in their usual state, or more confined than usual, I should probably have elicited results similar to those set forth in the second list. It would appear then, that some kind of intestinal derangement may be expected during menstruation in about 75 per cent. of cases. Diarrhœa occurred at some time or other in 199 instances out of the 449 cases, so that this symptom may be expected in about 50 per cent. The frequency of constipation, for reasons already given, cannot be inferred from my first list, nor from Dr. Butler Lane's, which is even less explicit, and further inquiry is necessary before I can venture to assert that my second list is a faithful representation of physiological facts.

III. As a symptom of menstruation at the period of cessation, it occurred in twelve per cent., irregularly in eight, and regularly in four per cent., being vicarious to menstruation every month, in the same manner as is more frequently the case with leucorrhœa.

With respect to the nature of the diarrhœa, it is generally unattended by pain or any other circumstance, and merely consists in a greater relaxation of the bowels, which are moved two or three times a day instead of once. Sometimes however, for two or three days it is preceded by nausea, slight colics, and wind. This last symptom was noticed by Friend, as occurring just before menstruation, and by him erroneously referred to plethora. I have known these symptoms to last habitually eight days before the appearance of the diarrhœa.

With respect to the nature of the evacuations, they are, generally speaking, healthy; sometimes of the usual consistence, or rendered

more liquid by an increased quantity of mucus, while after cessation they are more frequently of a serous or watery nature, like soap-suds.

Pinel mentions (Med. Clin.) the case of a woman who had ceased menstruating for a year, but who suffered every month from violent abdominal pains followed by diarrhœa.

Thus as a prodromic symptom, diarrhœa scarcely ever occurs; it is found in 12 per cent. of cessation cases; and it is a very frequent precursory or attendant symptom of fully established menstruation. Such are the facts from which I now propose to deduce a physiological meaning.

Physiological Inference. Generation, so simple in animals of a simple structure, becomes more complicated as we ascend the scale of created beings; and in the most perfect of all animal forms it attains to so high a pitch of dignity, that for the mere elaboration of a germ, which is only just capable of perhaps becoming a man by conception, the ovaries often call into consentaneous action most of the organs, which, being subsidiary to nutrition, are animated by the ganglionic nervous system. Menstruation then, far from being a passive discharge, to be accounted for by mechanical causes, must be more than ever considered as a critical termination, often preceded by mucous discharges from the generative and intestinal canals, as well as by the complicated nervous phenomena which most frequently precede both the uterine and intestinal discharges. A neural current impels the blood outwardly from the womb; but before this current effectually succeeds in doing so, the same, or at least a parallel nervous current has determined a similar outward flow of mucous secretions from the intestines, in more than 50 per cent. of the women I have questioned; and as no doubt occurs to every one in practice, we often imitate nature with great advantage, and hasten the uterine by accelerating the intestinal discharge.

When once a fact is established on respectable testimony, it is useful to seek to account for it by our knowledge of the laws by which it may be governed. Formerly, it would have been deemed a sufficient explanation to say, that it was the result of sympathy, or that it was caused by the transmission of irritation from the generative to the intestinal apparatus; but the light which Dr. Marshall Hall has thrown on the physiology of the nervous system, permits us to account for the phenomena by reflex action; for if the abdominal and not the respiratory organs are frequently implicated by uterine disturbance, it may depend, as Dr. Snow Beck has justly stated, on the fact that the nerves which surround the womb and the intestinal organs, arise from the same part of the spinal cord, while those going to the respiratory and circulating system, arising from a much higher portion of the spinal marrow, are not implicated in uterine disturbance. Dr. B. Lane in his interesting pamphlet, has sought to explain the intestinal disturbance during menstruation, by admitting a certain balance to exist between the biliary and the uterine secretions, and he says—

"I am therefore inclined to believe that constipation, to a greater or less extent, most commonly coincides with menstruation when the uterus is in a healthy condition, its function exerting a derivative influence in reference to the liver. On the other hand, if congestion of the liver be consentaneous with the period of uterine congestion, spon-

taneous biliary secretion, simultaneous with the menstrual flow, may afford relief; but if there be a still higher degree of hepatic congestion, it may occasion mucous diarrhœa, as it is known to do on other occasions, and that more especially if the irritative influence of dysmenorrhœa be present. Such I believe to be causes of the occurrence of diarrhœa during menstruation, and as a general rule, I consider it indicative of a morbid tendency."

In confirmation of his views, Dr. Lane adduces the fact of menstruation being sometimes preceded by a decided bilious state and that of bilious diarrhœa, sometimes preventing the appearance of menstruation or checking the flow; and lastly he argues, from the utility of mercury in setting right the menstrual function, when it is given to modify the state of the liver.

With deference to so excellent an observer, I cannot help thinking that Dr. Butler Lane has been too forcibly struck with the exceptional cases he has so faithfully represented, and has been led to consider them as more frequent than they are really; for, in taking into consideration the condition of the tongue, the quality of the stools, and the general appearance of the patients, I have seldom, except at the change of life, found any marked disturbance of the biliary apparatus, either in those who were confined or relaxed at or before menstruation. Being thus on one point at variance with Dr. B. Lane, it is just to say, that some of his views have lately received confirmation from a very distinguished observer, Professor Simpson,[1] who says—

"In very many women, the biliary secretion becomes disordered at the return of each menstruation; in some a state of constipation, in others a state of diarrhœa, recurring during each menstrual period. The biliary and menstrual secretions seem almost vicarious of each other; and as in other cases where such physiological relations exist, the two functions are not unfrequently simultaneously deranged in their pathological actions also, both being occasionally increased or decreased together; or, what oftener happens, one being increased in extent and activity, when the other is diminished. In some cases, the cure of an uterine disease seems also to rectify the coexistent, and perhaps resultant, hepatic derangement; while no doubt also, in other cases, we find ourselves unable to amend and correct uterine diseases and discharges, till we have, in the first instance, used appropriate means to modify and correct the attendant hepatic disorder."

Whether irritation, sympathy, reflex action, or a too great activity of the biliary apparatus, be the cause of this intestinal disturbance during menstruation, it must be considered part and portion of the phenomenon of menstruation; and this is all I wish at present to maintain.

I have already pointed out the similitude that exists between the diarrhœa which precedes the elaboration of the germ by the ovary, and that which precedes the parturition of the perfect fœtus by the uterus; and I have shewn that, in both these natural processes, nervous currents direct at the same time the fluids to the outlets of those duplications of the same skin, the generative and the intestinal tubes, which

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[1] Simpson, Dr. J. Y. Edinburgh Month. Journ. for February 1851, p. 165.

are placed in such close juxta-position, and so much influence each other, because they are governed by the same nervous force, are relieved by the same system of vessels, and are intended to fulfil the same end. For, while the intestinal surface is made for the preservation of the individual, the generative surface is destined for the preservation of the race, which is but another mode of self-preservation, enabling us to exist in the future, and to extend ourselves into time and space.

Facts, founded on 449 observations, made by two different observers, led me to inquire into the physiological bearing of catamenial diarrhœa, in the hope of being thus conducted to the better understanding of some pathological data.

I. Whenever there is a great increase of uterine activity, a tendency to diarrhœa may be expected. Dr. Lane states, that in about half his cases wherein diarrhœa occurred during menstruation, dysmenorrhœa also existed. Dr. Rigby makes a somewhat similar statement respecting the majority of the cases of dysmenorrhœa he has met with; and I have several times seen diarrhœa occur in cases of menorrhagia, both flows progressing and abating together.

Dr. Henry Bennet has stated that, judging from several remarkable cases, he had concluded that prodromic diarrhœa coexisted with inflammation of the neck of the womb, leading him to expect the one when the other was present. I cannot, however, consider diarrhœa a constant attendant on uterine inflammation; for, as Professor Simpson truly observes, "often in uterine disease there is constipation, and sometimes a want of power to expel the fæculent matter, as if there was a kind of paralysis of the rectum; which not unfrequently occurs in cases of retroversion of the unimpregnated womb." In twenty cases of uterine tumours, Dr. B. Lane found that the bowels were unaffected in four instances; constipated in two; relaxed in fourteen instances.

II. If it be true, to a certain extent, that diarrhœa might be expected in diseases of the uterine organ marked by increased activity, it is still more so that constipation may be looked upon as the rule, in those diseases of the ovario-uterine organs characterised by their deficient action; for, as the presence of the menstrual nisus is as much felt by the intestines in their particular way as by the womb, so, when in suppression the womb is deprived of its critical discharge, the intestines are likewise deprived of theirs; and constipation, as Friend has already correctly stated, is the frequent companion of suppressed menstruation.

The obstinacy of constipation in chlorosis led many a practitioner to confide principally in purgatives, long before Dr. Hamilton, of Edinburgh, made it his sole means of treatment. Those cases are indeed exceptional, wherein serous discharges last long in anæmic women, in whom menstruation has long been suppressed. This circumstance, as well as the state of the skin, lead one to suspect this serous diarrhœa to be caused by enteritis, often depending on a tuberculous diathesis.

But of what use are facts, and our deductions from them, physiological as well as pathological, unless they lead to therapeutics? If I mistake not, the knowledge of the very intimate organic relation

existing between the generative and intestinal mucous surfaces, gives us the key of much empirical practice, and will therefore enable us to act in future with that full confidence only to be obtained from knowledge. It explains to us why daily it is sought to insure the deficient action of the womb, in suppressed menstruation, in chlorosis, in labour, by the administration of purgatives; and why, on the other hand, we daily seek to diminish the too great activity of uterine action by the injection of opiates into the rectum in dysmenorrhœa, in irritable uterus, in diseases of this organ, as well as in those little understood conditions of the womb which so often lead to abortion.

London, July 1851.

OBSERVATIONS ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF THE DYSENTERY OF INDIA.

By JOHN TAIT, Esq., Assistant-Surgeon Madras Retired List, H.E.I.C.S.

WITHIN the last few years, the profession have been favoured with some important contributions to the pathology and treatment of tropical dysentery. The researches of Professor Parkes have disclosed the fact, that ulceration affects the solitary glands of the large intestine, and that it exists during the early stages of the complaint. The standard works of Annesley, Twining, Johnson, and Martin, make no allusion to these features of the complaint, and the discovery adverted to has consequently disproved the idea formerly entertained, that ulceration was met with only as a sequence of a protracted inflammatory attack of the mucous membrane.

The acute dysentery of India is found associated with three grades of ulceration of the mucous membrane of the colon. In the first, which may be styled simple ulceration, in contradistinction to the others, the ulcers, in the earliest stage of their development, are seen as minute points affecting the solitary glands, and from this, to the size of half-a-crown, they present every intermediate variety in point of extent. They are of circular shape, having a ground of coagulable lymph superimposed upon cellular membrane, which frequently presents a variegated appearance from the presence of minute red points of the subjacent muscular fibres. The circumference is guarded all around by an effusion of lymph under the mucous membrane, which directly limits the spread of the disease. The mucous tissue for the space of an inch, or an inch and a half, in the vicinity of the ulcers, is in an inflamed state.

With reference to the ulceration originating in the glands, I may state, that shortly after Dr. Parkes promulgated his views upon the pathology of this disease, I had an opportunity of verifying the truth of his observations, by examining the intestines of a patient who died from an attack of cholera, after being three days in hospital for acute dysentery. By the aid of the microscope, I discovered the small tumefied glands with an ulcerated depression in the centre; and, with the eye unaided by optical instruments, I was enabled to trace the ulcerated specks, in different stages of advancement, to the size of

a split pea. The appearances now described have been carefully looked for by me in the colon of different subjects, but, except in those who had suffered from dysentery, I have not been able to trace them. The phenomena observed during the exhibition of mercury for the cure of the disease, would seem to argue much in favour of the ulceration being primarily located in the solitary glands. Those who have had frequent opportunities of witnessing the therapeutical effect of the medicine in this complaint, cannot have failed to remark that a perfect resolution of the disease is not effected, until the salivary glands are fully engaged by the mercury. Every one is familiar with the metastasis that takes place between the parotid gland and testes; and it would appear that the salutary operation of mercury in acute dysentery arises from the irritant action set up in the salivary glands, translating, as it were, the disease from the solitary glands to those secreting the saliva. Again, I have examined the bodies of many men who died from dysentery complicated with hepatic abscess. I do not remember a single instance in which I did not find the ulcers of the colon either healed or contracting; and I have repeatedly remarked the great relief that immediately followed, with respect to the dysenteric symptoms, on the supervention of hepatic complication, or, in other words, a rehearsal of the phenomena occasionally observed to take place between the parotid and testes.

The absence of such an affection of the glands in other cases than dysentery, coupled with what has been detailed above, are to my mind conclusive proofs that the ulcers have their origin in the solitary glands. The discovery of the fact of ulceration being present in the early stage of dysentery, has been productive of important consequences in the treatment of the disease. The morbid condition of the membrane alluded to, was supposed to be present only when the disease did not yield, or when the evacuations became watery, and the utility of mercury at this stage was much and justly questioned; but from what will be hereafter detailed, it will be observed that this remedy is one of the most valuable agents in producing cicatrisation of simple ulcers, and that it is only in asthenic forms of the complaint that it is inadmissible. The persistence of the symptoms, with loose evacuations, are indicative of the simple ulceration having passed into a more advanced stage, in which nature opposes no barrier of protective lymph to limit the ulcerative absorption, which consequently extends itself, and destroys the patient. This form of the complaint I shall consider under the head of "spreading ulceration."

The symptoms which constitute an attack of dysentery, and with which the simple ulceration is identified, are usually the following: After a premonitory diarrhœa of one or two days duration, the patient experiences a constant desire to go to stool, preceded and accompanied by severe tormina about the umbilicus. Every effort to evacuate the bowels is attended with urgent tenesmus, and nothing is passed but mucus, mixed with blood; the latter being either incorporated with it, or faint traces being interspersed throughout the secretion. In first attacks of the disease, or in subjects who have recently arrived in India, the symptomatic fever usually runs high, and, along with a small firm pulse, there is the dry strictured skin described by the late Dr. Johnson. Some tenderness may generally be felt over

the cæcum, but there is seldom much exalted sensibility to pressure over the other parts of the abdomen. Where the general fever, tormina, and abdominal tenderness are severe, they afford good guides for the employment of active treatment; but cases are frequently met with where these symptoms either singly, or collectively, afford us little information respecting the treatment to be adopted. We therefore require the presence of a symptom, which will assure the tolerance of active and decided remedies. This symptom, I think, is to be looked for in the evacuations. In the form of disease now under consideration, the mucus, however much it may vary in colour, is either viscid and adherent to the vessel into which it is discharged, or it is voided in masses firmly coherent. Where either of these appearances of the evacuations is observed, full bleeding should be at once employed for reducing the inflamed condition of the mucous membrane before mentioned, for lowering the system, and for paving the way for the salutary reception of mercury, on the action of which the healing of the healthy ulcers depends. As soon as the salivary glands are affected, the lymph which bordered the ulcers is speedily absorbed, and contraction of the various solutions of continuity takes place, leaving a visible puckering where union has been effected. Opium in large doses materially expedites this much desired termination of the disease, by restraining the peristaltic action of the bowels, and by mitigating the harassing irritability which accompanies an attack of dysentery, and which proves so adverse to the reparation of structure. When a case of the kind is seen early and is properly treated, its tendency is to terminate in resolution; and if mercury in large doses is to be approved of in this complaint, the variety under review is one above all others where it is most successful, especially should there be nothing but pure mucus in the evacuations, and if the latter are accompanied with urgent tenesmus. Mercury cannot be depended upon for the cure of dysentery, unless the tension of the blood-vessels is well moderated by appropriate depletion; as, where this practice is unattended to, it is apt to engender an unhealthy action. It should be given with full doses of opium, as their combination lessens the chance of the mineral over-exciting the system, and causing further disintegration of the affected tissues.

Between the first and second varieties of ulceration, there is what may be called the transition stage, or the transformation of the healthy into the unhealthy ulcer. A simple sore, when situated on the extremities of the body, is sometimes suddenly changed into an irritable one. The granulations first become dry and shrink, they then take on a stunted appearance, and finally disappear, leaving a ground, which, either from defective, or perverted action, does not possess sufficient vitality in itself to excite contraction of the sore. The like phenomena are observed to take place when the ulcers are situated in the mucous membrane,—with this difference, that while in those affecting the extremities, the disappearance of the granulations takes place from the border towards the centre, in the mucous tissue of the bowels this is reversed:—and it is not until the ulceration undermines the border of the intestinal ulcer, that the ring of protective lymph breaks down, and permits further extension of the disease, which then constitutes the spreading ulceration. The only symptom which can be

relied upon for giving us information of the transition stages being developed, is the discharge from the bowels, which resembles the washings of raw meat. If, during the exhibition of mercury for the cure of simple ulceration, the gums, instead of swelling, become ulcerated and excessively painful—the presumption is strong in favour of this morbid condition of the ulcers being established.

Such cases almost always prove fatal, either by extension of the disease, or by leading to the formation of hepatic abscess. The treatment which I consider most applicable is, ipecacuanha and opium in full doses, with local bleedings, and counter-irritation. Where the morbid action in this form of the complaint fails to dissipate the lymph on the edges of the ulcers, fresh layers of fibrine are deposited, and sometimes in such quantity, that the sore is prevented from contracting, simply from a redundancy of lymph; in fact, in such a case, we have presented to us, on the mucous membrane, the perfect type of the indolent ulcer on the surface of the body. This pathological state of the mucous membrane is the cause of chronic dysentery. The transition stage is therefore fraught with danger, as it is not much under the influence of any treatment; and its terminations are to be dreaded.

There is, perhaps, no disease (cholera excepted) which perplexes a young medical officer on his arrival in India, more than dysentery. When he first enters the service, he is sent to do duty in the General Hospital, where the generality of patients who are admitted suffering from this complaint, are merchant-seamen, etc., who are temporarily stationed in India. Such subjects, when seen early, usually present the symptoms of simple acute dysentery, and the disease commonly gives way to judicious bleeding, with calomel and opium, etc. In a short time, the Assistant-surgeon is ordered to join a European Regiment, where the men have been some years in the country. Cases of dysentery occur, but the men disregard its earliest symptoms; they have recourse to ardent spirits to allay their uneasy feelings, and it is not unusual to find soldiers presenting themselves at Hospital, ten days (and I have known it a fortnight) after the first symptoms of the disease have set in. On admission, they are found affected with an advanced stage of the disease, in which the time for active depletion and the internal employment of mercury has gone by, and the mucous membrane is in a state of spreading ulceration. From the circumstance of soldiers continuing to do their duty for some time after the first invasion of the disease, it would appear that the inflammatory stage of dysentery, uncomplicated with ulceration, is limited to the first few days of the disease, probably to the initiatory diarrhœa. I cannot imagine that acute inflammation could be present for days together without giving rise to corresponding symptoms; but, as soon as ulceration is established, pain is diminished, because the tension, caused by the infiltrated condition of the affected membrane, is relieved by the outlet which the ulceration affords to pent-up fluid.

I now come to the second division, or spreading ulceration. The ulcers are watery-looking and ill-conditioned; their form is irregular, and the edges are undermined from ulcerative absorption, extending some distance beneath the margin. There is no conservative lymph thrown out round the base; they are usually of much larger size than those

first mentioned, and they very often become confluent; so that, in fatal cases, it is common to find the integrity of the mucous coat of the colon completely destroyed by a continued mass of ulceration. The tormina, tenesmus, and general symptoms, give us no particular indications of the disease having advanced to this stage; but the stools no longer present the tenacity of those accompanying simple ulceration; they are loose, glairy, and gelatinous, and, in extreme cases, they become quite watery and offensive. The blood discharged is no longer intimately blended with the evacuations; it is either in loose streaks, or coagula. The treatment which has been found most efficacious in these cases, has been nitric acid and opium. Ipecacuanha and opium in full doses; and, in the adynamic forms of the complaint, three grains of the nitrate of silver every four hours, with opium, have been employed with much success by Dr. Gamble, of H.M. 4th regiment of foot.

The third and last variety is the most fatal form of the complaint; the local disease sets in with great intensity, and runs its course with fearful rapidity, to the sloughing stage. From the first, there is great depression of the system; and, in lieu of the tormina and abdominal tenderness complained of in other cases, there is often nothing more to be discovered than a sense of morbid heat along the course of the colon; pain is usually absent. In two cases of this description, which occurred in my practice in 1843, and which were published in the *Madras Medical Journal*, there was little or no attendant pain or distress. The stools are grumous and offensive, with shreds and *débris* of the affected mucous membrane. A large portion of the inner lining of the gut, or the tubular incrustation of pseudo-membrane formed by coagulable lymph, is not unfrequently discharged. When the secretions from the bowels assume a chocolate-colour, of the consistence of treacle, and are copious and offensive, it is a most fatal symptom of the disease. Very few recoveries take place from this form of the complaint. On dissection, there is found excessive softening of the gut, which breaks down under the hand, and perforation is generally found to have taken place from sloughing of the whole coats of the intestine. I know of no treatment which is of use in this stage. Everything which I have tried has invariably failed; but there is one remedy which has suggested itself to me, and which I think is deserving of trial, viz., *yeast*.

I have already alluded to the beneficial effect on the dysenteric symptoms, which attends the translation of morbid action from the solitary glands to the liver, and where this translation ends in the formation of hepatic abscess. I have been led to remark the extraordinary healing power which the fermented stools, (characteristic of abscess in the liver), possess over the ulcers of the colon. This is not to be wondered at, when we consider the efficacy of carbonic acid in irritability of the stomach and intestinal canal, and its soothing properties in ulcers generally. I therefore regret that I never gave *yeast* a trial, either by the mouth or by injection.

The various forms of ulceration have one common origin in the solitary glands. The first variety passes into the others by the advancing severity of the disease. The simple and the spreading ulceration affect the cæcum, ascending, transverse, and sigmoid flexures of the

colon. The sloughing form I have found most frequent in the ascending colon and sigmoid flexure.

Complete recovery from simple ulcerative dysentery is very common, in so far as regards the mere union of the abraded surface. In the *post-mortem* examinations of men who have been some time in India, and have suffered from dysentery, extensive cicatrices are always remarked in the colon. They seem, during life, to give rise to irritability of the bowels and general emaciation, from the functions of the glands of the mucous lining not being carried on in these cicatrized spots. They are usually dry, and destitute of the halitus which bedews the intestinal mucous surface. I would here remark, that to bring about the union of the ulcers, the case, if seen early in the simple acute stage, should be very actively treated by full bleeding, followed by a scruple of calomel and two grains of opium; a hot hip-bath, and an enema, containing a scruple of acetate of lead, and a drachm of laudanum; much relief usually follows such treatment. In spreading and sloughing ulceration, mercury is contra-indicated, as it is in all cases where there is either a deficiency of fibrine, or where the system fails to elaborate it. In the stage of convalescence, the flow of healthy bile should be solicited by nitric acid, as this secretion is a grateful stimulating corrective to healing ulcers.

These observations are thrown together for the purpose of drawing attention to the *evacuations*, as indicative of the different stages of dysentery, and as the best guides for the treatment to be adopted. I have scarcely hinted at the colour of the secretions, as it is of secondary importance to their physical properties. It will be observed, that many and valuable subsidiary remedies have been passed over, as the aim of the writer is merely to give a few hints, in the hope that some one more able than himself may be induced to take up the subject, and give it that attention which it seems to merit.

Dunse, N.B., June 1851.

BIBLIOGRAPHICAL RECORD.

Pharmacopœia Collegii Regalis Medicorum Londinensis. Londini: 1851.

The new Pharmacopœia of the Royal College of Physicians claims a more extended notice than we can at present bestow upon it; but in reviewing the translations and commentaries now published or announced for publication, we may be able to return to the work to which they owe their origin.

Some will perhaps think that too many articles have been rejected which found a place in the old pharmacopœia, while others will perhaps think, that the system of eradicating useless incumbrances from the *materia medica* has not yet been carried far enough. But it must, we think, be admitted, that the compilers of the present pharmacopœia have exercised, upon the whole, a judicious discretion in its composition; they have struck out a number of matters which can very well be spared, while they have introduced many valuable additions to our stock of remedies, with which the progress of science has happily made us acquainted. Thus, to take a few instances at random: acetosella, acorus, asarum, aspidium, cardamine, centaurium, contrajerva, malva, marrubium, olibanum, opoponax, origanum, pyrethrum, rumex, testæ (oyster shells), toxicodendrum, tussilago, have, we think, very properly been excluded; while many valuable medicines, such as gallic and tannic acids, atropia, morrhuæ oleum, have been introduced for the first time. Formulæ are given for the preparation of chloroform, of sulphate of atropia, of liquor ammoniæ citratis, liquor morphiæ acetatis, liquor morphiæ hydrochloratis, liquor arsenici chloridi, syrupus ferri iodidi, and several others.

New names of botanical genera and species have in some instances been adopted. Elaterium is said to come from ecbalium officinarum instead of momordica elaterium; jalap from exogonium purga instead of ipomœa jalapa; kino from pterocarpus marsupium instead of pterocarpus erinaceus, buchu from barosma serratifolia instead of diosma crenata; the yellow bark is referred to cinchona calisaya, the pale to C. condaminea, the red to an uncertain species; and gamboge, which was formerly improperly referred to stalagmitis cambogioïdes, is now said to be derived from an uncertain species of garcinia. Senna is still referred to the genus cassia, the Alexandrian to C. officinalis and C. obovata, and the Indian to C. officinalis. The question of the true species yielding rhubarb is disposed of by abandoning rheum palmatum, and referring the drug to an uncertain species. In these alterations, we approve the judgment exercised by the College; and where differences of opinion exist as to the exact plant which yields a drug in common use, we think that the question will be better settled by travellers and by botanists, than by an authoritative dictum expressed in the pharmacopœia.

In the nomenclature of chemical compounds, few alterations have been made; but the sesquisulphuret of antimony is now called, and we think properly, the tersulphuret, and the trisnitrate of bismuth is now called the nitrate. We are glad to perceive that no alteration has been made in the pharmacopœial names of calomel and corrosive sublimate; for, although we are inclined to think, from theoretical considerations, that the first should be regarded as a subchloride, and the second as a chloride, yet we are too sensible of the danger of such a change in the nomenclature to desire its adoption; and we are glad to notice that, in order to prevent all misunderstanding upon the point, the names *calomelas* and *mercurius corrosivus sublimatus* are underlined respectively to chloride and bichloride of mercury. Only one iodide of mercury is retained, which, from its constitution, is the protiodide; and the bicyanide of mercury, which is not used either in medicine or pharmacy, together with that useless and anomalous compound, the hydrargyri sulphuretum cum sulphure, are omitted altogether.

The alphabetical list of medicinal substances, with a short description of their chemical characters, which stood in the last pharmacopœia, is omitted in the present; and the chemical notes, which are very judiciously and carefully drawn up, are attached to the different articles as they are mentioned in their places in the body of the work. The chemical description of arsenic, which was very defective in the last edition, is full and correct in the present.

The College has purposely omitted the processes for preparing many substances which are manufactured on a large scale; for, to use the words in the Preface, "haud iniquum fore arbitrati sumus, ut si quæ sint apud mercatores chemicos accuratissime et limatissime præparata, ea quidem enumeremus potiùs et describamus, quàm quâ quæque ratione et quibus modis præparanda sint, exponamus: utpote quæ nostris usibus eousque inserviunt, ut eadem a nobismetipsis præparari minime necesse sit." And a little farther on we are told: "Verum enimvero cùm ad hæc et alia quævis rite preparanda summa cura et diligentia pro viribus nostris impensa est, non tamen abnuimus, quin possit fieri, ut aliis fortasse modis minori sumptu vel magis commode aliis in re chemicâ peritis eadem præparare liceat." This modest admission, however, is in very little accordance with the official English announcement with which the book commences, and in which we are told, that "Her Majesty doth strictly require, charge, and command all and singular apothecaries and others, whose business it is to compound medicines, or distil oils or waters, or make other extracts within any part of Her Majesty's kingdom, that they and every of them, immediately after the said Pharmacopœia shall be printed and published, do not compound or make any medicine or medicinal receipt or prescription, or distil any oil or waters, or make other extracts that are or shall be in the said Pharmacopœia mentioned or named, in any other manner or form than is or shall be directed, prescribed, and set down by the said book, etc. . . . And Her Majesty doth hereby declare that the offenders to the contrary, shall not only incur Her Majesty's just displeasure, but be proceeded against for such their contempt and offences, according to the utmost severity of law."

Notwithstanding the inclination manifested by the College to omit the details of the preparation of many of the pharmaceutical compounds, they have still retained formulæ for the preparation of calomel, corrosive sublimate, tartar emetic, and hydrocyanic acid, the mode of preparing which might just as well be left to the discretion of the manufacturer. We cannot help lamenting that, although the College threatens the royal vengeance against "all and singular apothecaries and others," if they venture to deviate from the directions given in that Pharmacopœia, no control whatever is exercised by the legislature over those who take upon themselves the manufacture and sale of medicines. This important branch of therapeutics is, in fact, left to the individual respectability of the wholesale druggist, who, if he act honestly has no reward except that of his own conscience, and, if he act otherwise, has no tribunal to punish his errors or expose his ignorance. But we grieve to add, that the directions of the College cannot always be complied with; and that some of them are so vague as to be useless. The Latin language is ill suited to the simplicity and explicitness which ought to characterise a book written for the use of London tradesmen.

A Practical Treatise on Diseases of the Urinary and Generative Organs in Both Sexes. By W. Acton.

(Concluded from p. 653 of last Number.)

The subject of the *Second Part* of the work before us is Syphilis. We quote Mr. Acton's definition, because, though clumsily worded, it presents, in one view, many circumstances which it is of much advantage to keep continually in mind:

"Syphilis is a virulent and specific affection, the essential character of

which is its dependence upon a *special* cause, or a distinct morbid poison or *virus*, identical, and hitherto thought peculiar to man.

"Never arising *suâ sponte*, but always, in the present day, the result of contagion from another person, capable of producing, when coming in contact with the economy, local effects, in which we find the fatal cause which has produced them. These local consequences may react on the system, and develop constitutional symptoms which, under certain circumstances, are readily transmissible from the parent to the child, but which cannot again reproduce the specific cause which gave rise to them. Now, although this specific cause may reproduce its effects several times on the same individual (when placed under the necessary favourable circumstances), the general constitutional symptoms will occur but once in a man's life. Lastly, syphilis may be called a disease which most frequently requires a special treatment."

PRIMARY SYPHILIS.

Chancre. The true characters are best observed in the artificial ulcer produced by inoculation :

"During twenty-four hours succeeding the operation, the inoculated point becomes red ; in the course of the second and third days, the surrounding parts are slightly swollen, and assume a papular appearance, or already traces of a vesicle are seen on the summit ; on the third or fourth day a fluid, which is more or less transparent, is observed beneath the epidermis, and a distinct vesicle becomes apparent, where the papula previously existed, and a dark dot is seen in the centre, owing to the coagulation of the blood which had escaped through the puncture of the lancet ; from the fourth to the fifth day, the vesicle assumes a pustular character, and a distinct depression is seen in the centre, so that it represents very distinctly, at this period, the small-pox pustule. The red areola, which has been hitherto gradually augmenting in intensity, now as gradually fades away, and the cellular tissue, which was slightly œdematous, becomes infiltrated with plastic lymph. On the sixth or seventh day, the pustule is observed to be wrinkled, in consequence of the contents becoming thicker, and ultimately a crust takes the place of the pustule. If not interfered with, this crust assumes a conical appearance, increasing always at its base ; it may ultimately fall off, or, if removed, leaves an ulcer seated on a slightly œdematous base, in depth equal to the thickness of the skin : the bottom of the ulcer is covered with a whitish pulpy substance or false membrane, which adheres so firmly, that it can with difficulty be wiped off. The ulcer is generally circular, and appears as if made with a *punch*.

"The margin, if viewed by means of a microscope, will be found dentated, and covered with a secretion similar to that seen at the bottom of the ulcer. The border is slightly œdematous and raised, and the areola around it is of a browner tint than at the previous stages ; this œdematous condition of the border occasions a slight eversion of the edges, and hence the ulcer may assume a somewhat infundibuliform appearance."

This secretion, removed from the surface of the chancre, and kept in close bottles during seven days, will produce all its effects at the end of that period, proving that the vitality of the part is not necessary for the preservation of the peculiar effects of the virus. To show the very minute quantity of virus necessary for producing specific effects, one drop has been diluted with a pint of water, and the inoculated fluid has produced a pustule. If alkalies or acids be mixed with the virus, and inoculation afterwards attempted, no effects will follow. These same substances will likewise destroy the property with which inoculation has invested the sore, of producing an analogous secretion, provided they be employed at an early stage. Simple substances, or ointments, will have no influence either in destroying or aiding the effects of the secretion.

Mr. Acton does not believe that it has yet been proved that the lower

animals can be inoculated with it, and in a long and interesting note, narrates and criticises the experiments of M. Auzias-Turenne (pp. 354-5). He, however, is of opinion "that syphilis in the human race originally arose from some poison introduced into the economy from animals, and that, thus produced, it has been transmitted from one individual to another." Of course all *proof* of this is absent.

Mr. Acton does not believe that the syphilitic virus will act upon the skin or mucous membrane, while the epidermis and epithelium are uninjured. He also denies a period of incubation, believing that, in those cases in which there has been the appearance of such an event, the virus has entered a mucous or sebaceous follicle, remaining there until the irritation caused by its presence has destroyed the cuticular lining, when the specific effects have immediately shewn themselves.

We would particularly direct our readers' attention to the very sensible and judicious remarks of Mr. Acton on the subject of inoculation, to be found at pp. 363-4.

In regard to Diagnosis, our author believes that nothing but inoculation can *positively* declare a sore to be syphilitic.

In the Treatment of simple uncomplicated chancre, Mr. Acton is a strenuous advocate for the employment of caustic; and his remarks are so judicious, that we quote them *in extenso*.

"Experiments on inoculation have incontestably proved, that if caustic be employed soon after the receipt of the virus, all further effects may be stayed; they have, moreover, shewn, that up to the third day the disease is of a local nature, entirely confined to the parts with which the virus has come in contact; and the patient may be guaranteed against the occurrence of secondary symptoms. I would remark here, however, how different are the laws of animal poisons. Glanders, when inoculated, and the pustule destroyed in twelve hours, produces its effects as usual; the rattle-snake poison acts still more rapidly, each animal poison having laws of its own. We may be called in too late; but the surgeon must not be inactive, he must combat the disease with all his means.

"If, however, it may be desirable to cauterise abrasions or excoriations, the injudicious and continued use of escharotics may be fraught with great disadvantage, and caustic may act as an irritant, preventing the healing of a sore.

"This is often witnessed in patients who think that they can treat their own cases, and following, as they believe, the surgeon's plan, employ nitrate of silver most bountifully. Great pain is produced; a deep eschar comes away in the course of a few days, the irritability of the organ is greatly increased; and, being unable to uncover the glans, the patient now seeks the assistance of his surgeon, who, after carefully examining the parts, finds the original sore re-inoculated, and perhaps several other small ones in the neighbourhood. These cases clearly show that the employment of caustic, in injudicious hands, may often do more harm than good; that while the nitrate of silver destroys the virus of one sore, the irritation it produces prevents us seeing the mischief accruing to others; and probably the non-observance of these rules has led to caustic being very much abused. Before we employ nitrate of silver, the part should be carefully cleansed, by being soaked in warm water, as the virus may exist on the surface of the neighbouring skin, and, if not washed off, will re-inoculate the sore when the little eschar falls, and undue blame will be thrown on the caustic. Although, then, no other ulcer exists at the time of using the escharotic, still another sore, or a little pustule, frequently, in a few hours after, will be met with, which, if precautions be not taken, will go on increasing, and the disease will spread rapidly. These circumstances explain several anomalies which have thrown discredit on caustic. The parts should now be carefully dried; and, if it be an excoriation the surgeon is called on to treat, the skin should

be put on the stretch, and the solid stick of nitrate of silver lightly passed across it, so as effectually to whiten the surface in its entire extent. All cracks and crevices must be treated in the same way, and dry lint applied for the next eight or twelve hours after cauterisation.

"Should the surgeon be called upon to treat chancres at the orifice of the prepuce, presenting the appearance of cracks, he must draw back the prepuce gently, and he will be enabled to cauterise the entire extent of the chancre; but, in repeating the operation, let him take care not to rupture the cicatrix, or this linear chancre will extend. The same observation applies to the treatment of chancres on the frænum. To obviate the difficulty of healing such ulcers, I usually divide the frænum, and cauterise the whole of the cut surface. Without these precautions, it may be weeks before you will heal such sores. Reliance must not be placed alone on caustic, and previous ablution, but extension of the disease should be stayed by lotions of an astringent kind. The one I prefer is a solution of pure tannin, in the proportion of two grains to the ounce of water, which not only checks the discharge, but seems to tan or harden the skin. The private patient, however, should be told, that this solution slightly stains his linen with a brown mark, or the lotion may tell tales to the family. To obviate this, a weak solution of sulphate of zinc may be employed, or, if desirable, dry lint; but dry lint has the objection, in some instances, of irritating the part, and prevents the little eschar falling, thus preventing us from re-applying the caustic.

"We now come to consider how soon the caustic should be re-applied. The rule I follow is, to employ it as soon as the eschar is removed, and this will vary in many cases; generally speaking, it is sufficient to cauterise once in twenty-four hours, particularly if the sores be numerous or large. More frequent applications might be useful, did they not produce irritation; and, should swelling of the prepuce arise, the mischief will be greater than by allowing the disease to run its course, as, in the latter case, we should be unable to employ ablution. Before removing the lint, let the part be well soaked, or the little eschar may be detached.

"If, however, nitrate of silver is useful in abrasions and excoriations, reliance should not be placed upon this escharotic in severe cases, or where pustules or ulcers are formed. Experience teaches us that this salt is not sufficiently potent, its action being confined too much to the surface, and repeated applications are necessary, which may be oftentimes inconvenient. Whenever, therefore, the surgeon is called on to treat a pustule which he suspects to be a chancre, let him open it, remove the pus with a point of lint, and fill the little depression with Vienna paste, or cauterise it with the solid lime and potash caustic alluded to at p. 305. In cases where a scab covers the ulcer, the former must be first removed: this is readily done by a poultice or water-dressing, and then, after carefully washing the surface, a layer of one or other of the above-named potent caustics may be placed on the sore, and allowed to extend a little beyond the margin of the ulcer.

"The application of the escharotic is, of course, followed by considerable pain, which gradually goes off; the sore, however, should be exposed until the eschar is dry, or the paste would act on any part it comes in contact with. This eschar falls in due course, and leaves beneath it, generally speaking, a cicatrised spot, or a healthy sore, which has lost its specific action, and heals in a few days under a mild astringent wash.

"Cauterisation, however, will not be found of the same efficacy in very large ulcerations, nor have we seen such favourable results when sores are situated on mucous surfaces, or where they are kept damp; in these instances, the abortive treatment does not succeed. Furthermore, the escharotic is not generally applicable in chancres attended with inflammation. Experience proves here, as elsewhere, that although nitrate of silver may be useful in allaying irritability, and in curing subacute inflammations, its employment in acute inflammatory attacks is very doubtful, or, at most, useful in

but a very few instances ; and, though surgeons may derive great benefit from its employment in chronic ophthalmia, in scrofulous constitutions, and in subacute inflammation of the urethra, few, if any, ever recommend it in acute affections of these organs, unless in the single exception of erysipelatous affections of the skin, in which it has been, like many other applications, much vaunted, and subsequently laid aside. When chancres are attended with acute inflammation, caustic will be worse than useless. Experiments prove that phagedæna destroys the virus, and they likewise show us that caustic often increases instead of allaying inflammation ; therefore, when the latter is present, recourse must be had to opium, rather than to nitrate of silver, as I shall show when treating of that variety of chancre.

" But it is not alone in acute inflammatory chancre that we must lay aside the use of caustic ; we should never apply the salt when previous applications have irritated the sores, or we might continue its use *ad infinitum*, without healing the ulcer." (pp. 389-92.)

Another counter-indication to caustic, is induration of a sore ; if it be applied in these cases, great pain will be produced, the sore will become irritable, and gangrene will often follow. In simple cases, Mr. Acton recommends no constitutional treatment, and argues strenuously, and we think with good reason, against the use of mercury.

Inflammatory Chancre is usually met with in young plethoric men, who live high. If it be not treated by active depletion, it may readily terminate in gangrene. Where this occurs, the specific nature of the virus is destroyed, and secondary symptoms never follow. A saturated aqueous solution of opium is the best local application, and opium internally, and in full doses, is generally necessary.

Phagedænic Chancre often occurs in anæmic, irritable, dissipated subjects. It presents the following appearances :

" The phagedænic sore may vary in size from that of a pea to a crown piece ; usually it is superficial, rarely extending deeper than the subcutaneous cellular tissue. The shape is more or less round, but still irregular ; the edges, of a brownish hue, are usually undermined, and the disease has a tendency to burrow, particularly if position assists it. The base of the sore is somewhat swollen, not, however, indurated ; the surface is uneven, covered with little eminences and depressions ; presenting here and there attempts at cicatrisation ; a more or less adherent yellow matter covers the ulcer, which it may be difficult to remove, or which comes away in shreds. Granulations are altogether absent ; or, if any exist, they are observed to be pale, few in number, transparent, and swollen, looking like vesicles ; more frequently, however, the surface is of a greyish yellow colour, interspersed here and there with little bloody points or reddish lines. The pus is thin and offensive, holding in suspension the detritus of the tissues and flocculi of pultaceous matter ; it is inoculable during the progressive period. The ulcer rarely extends, however, beyond the subcutaneous cellular tissue. It may last a long time, and cicatrisation may be much retarded.

" It is not uncommon to see, on the surface of phagedænic ulcers, a species of ecchymosis and sphacelated spots. There is pain, of a peculiar stinging, smarting kind, which keeps the patient very restless. The general symptoms seldom run high ; the fever is rather of an adynamic kind ; there is often prostration of the vital powers ; in advanced stages of the disease, the appetite is lost ; there is pain in the head, palpitation, neuralgic pains, and a peculiar unhealthy hue of the skin ; various eruptions may appear, either around the sore or on the body ; these may consist of ecthyma, eczema impetiginodes, or rupia, all of which have been and may be mistaken for secondary symptoms. The debility and general prostration of the animal powers gradually increase, and the patient, unless relieved, gradually sinks, worn down by diarrhœa and colliquative sweats. M. Ricord states he has found ulcerations in the intestines, in cases in which he has had an opportunity of performing post-mortems." (p. 405.)

In these cases, mercury is most injurious, but the greatest benefit will be derived from *iron*. Mr. Acton uses the tartrate, but probably any other form would answer as well.

In Sloughing Phagedæna, Mr. Acton has most confidence in opium given freely in large doses. Destruction of the surface of the ulcer by nitric acid is also useful in some cases.

He adds nothing to our knowledge of the best treatment for that most intractable of sores, the Serpiginous Chancre.

The next section contains a very full and interesting disquisition on Indurated Chancre, a most important form, for it is almost always the forerunner of secondary symptoms. In the treatment of this form, mercury is indispensable, and it should be continued as long as any induration remains. But it is not necessary to commence at once, on the first appearance of any hardness, for this may not be of a specific character, but merely the result of irritation, and may disappear under simple application. If, however, the symptoms persist for some days, the mineral should be administered without delay. We strongly commend to the notice of our readers Mr. Acton's plan of administration, which is characterised by great good sense.

In Syphilitic Cachexia, Mr. Acton finds iron of great value.

Urethral Chancre is the subject of the next section. This is the cause of *virulent* gonorrhœa; and its existence explains those cases which have so often given rise to the opinion, that gonorrhœa is capable of producing secondary symptoms. In all doubtful cases, where no sore can be seen on separating the lips of the meatus, inoculation should be practised, to clear up the diagnosis.

Bubo, under its different forms, is very fully described.

SECONDARY SYPHILIS, OR CONSTITUTIONAL SYPHILIS.

Under this head Mr. Acton includes diseases of the skin and mucous membranes, iritis, and affections of the testicle. They are the direct consequences of absorption into the circulation of the syphilitic virus, and are hereditary, or, in other words, capable of transmission from mother to child, but not inoculable. Our author believes that they can never be acquired more than once; *i. e.*, that when once the patient has been *thoroughly cured* of secondary symptoms, he will enjoy an immunity ever afterwards, however often he may contract chancre. But really this statement amounts to very little, on further investigation; for who would undertake to say that a patient had been thoroughly cured, when, as he is told over and over again in this same section, relapses are known to be among the most common of occurrences? so much so, that M. Ricord states his belief that we are powerless as regards the diathesis, and always warns his patients of their danger when he dismisses them, after treatment, which, for the time, has been successful.

We would specially direct our readers' attention to the premonitory symptoms as detailed by Ricord (p. 483), and to the rules for diagnosis laid down by the same great authority (p. 496). The passages are too long for extraction, and a mere analysis would be of little value.

In the treatment, Mr. Acton places his chief reliance on mercury, and we believe he is quite right.

Syphilitic Cutaneous Eruptions may all be classed under the following heads: exanthematous affections, vesicular, papular, tubercular, pustular, and ulcerations.

Roseola is the common form of the first, and is often confounded with a similar eruption caused by the administration of copaiba, which disappears whenever the drug is omitted; and also with a form of *pityriasis*. In arriving at a diagnosis in this latter case, Mr. Acton is determined by the co-existence or absence of condylomata, psoriasis palmaris, and sore throat.

Syphilitic vesiculæ are exceedingly rare. Where a patient presenting an

eruption of this kind appears of good constitution, the vesicles being distinct and the intervening skin healthy, the disease is not syphilitic.

Lichen is the usual form of papular eruption: our author believes that both lepra and psoriasis are merely modifications of it.

"Those who have specially written on skin diseases, have, as it appears to us, rendered more difficult an acknowledged difficult subject; they have attempted to create distinctions between *lepra* and *psoriasis*, which, in our opinion, are both terminations of a papular eruption. The *lichen* above-described may become dry at its summit, scales may form, fall off, and be reproduced, and this process may gain the base, and extend itself in an irregular manner, constituting what authors call *psoriasis*. On the other hand, the base of the papule may become scaly, the centre or apex remaining in a natural condition; the result is, that a circle is formed of these little scales, surrounding and surrounded by healthy skin; and as this circle is somewhat prominent, from a slight swelling of the dermis now secreting the scales, it has been considered sufficiently characterised to be termed *lepra*. On the same individual *lichen*, *psoriasis*, and *lepra*, may be seen; and we may here observe, that the little white border, described by M. Biett as characteristic of the syphilitic affection, is often wanting." (p. 508.)

In the diagnosis, he again relies on the same indications as in the exanthemata.

In the treatment, he strongly recommends mercurial fumigations, and we can bear testimony to the value of the plan. The following is the method of administration:

"The patient, having undressed, is seated naked on a chair in a large box, his head being the only part exposed to the air. This box is heated by a furnace, on which the bisulphuret of mercury is placed, in the proportion of three drachms for each vapour-bath. The intense heat applied soon volatilizes the mercury, which quickly fills the well-closed chamber or box with a leaden-coloured vapour that condenses on the body of the patient, who is exposed to its influence for twenty minutes, during the last ten of which he perspires profusely. The box is then opened, and the surface of the body is gently wiped, so as only to remove the drops of perspiration; a gown is now thrown over the body, and towels twisted round his legs, and the patient laid on a bed, thus swaddled up, between two blankets, which are tucked carefully around him, and additional coverings added. The patient is now left for half an hour, during which he perspires freely, and a glass of toast and water may be given. At the end of this time, the wet clothes should be removed, and the patient thoroughly rubbed down; after dressing, he should not at once expose himself to the open air, but remain a short time in a cool room. The vapour, thus administered, may be repeated two or three times a week, for a month or five weeks, and a cure of some of the most rebellious forms of secondary symptoms may be attained. It may be readily assumed that this treatment is one that cannot be easily carried into effect in the country, as the necessary conveniences are not at hand. In these instances, the vapour-bath may be had recourse to, and the cinnabar may be placed on a metal plate over a little charcoal furnace; but, from some experiments which I have instituted, I find that the mercurial vapour is so heavy, that it will not usually rise more than a foot, and the good effects of fumigation will be slight, as compared with those arising from the real fumigating apparatus. The body should be covered with a dark powder when the apparatus is well applied, and gold leaf will detect the presence of mercury on every part of the body. The above remarks, perhaps, explain why fumigations have fallen into disrepute, as the proper means of application are not always at hand." (pp. 511-12.)

Mr. Acton does not believe that condylomata are inoculable. As local treatment, he recommends a solution of chloride of soda as a lotion to bathe the parts twice a day; the parts should be well dried, and calomel be sprinkled upon them, and dry lint kept between the excoriated surfaces.

Under the head of pustulæ, he includes rupia, bullæ, and impetigo of the scalp. He finds the emplastrum ammoniaci cum mercurio an admirable local application.

In the local treatment of alopecia, Mr. Acton recommends stimulating washes, as, equal parts of rectified spirits, eau de Cologne, and castor oil, or, if a stronger one be required, equal parts of vermy water and tinctura lyttæ, some pommade being used also.

The throat is very frequently the seat of secondary symptoms. Patches of erythema appear, which become prominent, and then pale in the centre, extending in size. They are often of a circular shape, or like the figure 8 ; they frequently ulcerate ; their most common situation is on the tonsils, the sides of the tongue, or near the frænum ; they are met with less frequently at the corner of the mouth, and on the dorsum of the tongue. Generally the patient has other secondary symptoms at the same time.

The remainder of this chapter is occupied with Syphilitic Affections of the Eyes and Testicle, and Germinata, or Tubercles of the Scrotum, for which we must refer to the original.

TERTIARY SYMPTOMS.

Under this term are included those constitutional syphilitic affections denominated Nodes, Inflammation of the Periosteum, Exostosis, Caries, and Tubercles of the Subcutaneous and Submucous Tissues. Like secondary symptoms, they are not inoculable, and they are also incapable of transmitting constitutional syphilis hereditarily.

This chapter (which is almost entirely composed of extracts from M. Ricord's lectures), is full of interest; but we have already occupied so much space, that we can do no more than direct attention to it.

Causes of Death from Syphilis. Here we must request attention to the following table, because it very strikingly illustrates the fallacy of general opinions, not based on figures. Few, we suspect, would have imagined that syphilis had so small a number of victims in the metropolis.

" Table, *showing the Fatal Cases of Syphilis in Adults, which have occurred in the Metropolis during the years* 1846, 47, *and* 48*; distinguishing the Males from the Females, and the Diseases of which they died, at different periods of ten years.*

	Females.						Males.						Male and Female of all ages.
	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	Of all ages.	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	Of all ages.	
Syphilis	3	12	7	7	2	29	4	4	2	..	4	14	43
Phagedænic disease	2	3	..	..	..	5	2	..	..	..	..	2	7
Disease of bone	..	1	1	..	1	3	..	1	..	1	..	2	5
Ulceration of larynx	1	2	..	..	..	3	1	5	..	..	..	6	9
Venereal disease	..	3	1	..	..	4	1	2	..	..	..	3	7
Consumption	2	6	1	..	..	9	1	6	..	2	1	10	19
Chest affection	1	2	..	..	..	3	1	1	..	..	1	3	6
Paralysis	..	..	..	1	..	1	..	1	..	..	..	1	2
Cachexia and debility	2	2	3	1	..	8	..	..	1	3	..	4	12
Erysipelas	5	1	2	..	..	8	3	5	1	..	..	9	17
All diseases ..	16	32	15	9	3	73	13	25	4	6	6	54	127

" On looking over this table, the first thing that strikes the surgeon is the paucity of fatal cases from syphilis in adults. Notwithstanding the frequency of the complaint in the metropolis, as shown from preceding pages, only 127 deaths are noted in adults, out of a population amounting to more than

2,000,000; during 156 weeks, the average is not one a week. This, and a succeeding table on the proportion of deaths from syphilis in infants, p. 645, shows that syphilis proves most frequently fatal to children under one year of age; a fact, previous to the formation of these tables, which was not known to the profession.

"This table, moreover, contradicts the very prevalent opinion, that a large number of women, particularly prostitutes, die annually of syphilis. In the above table we find 73 women only to 54 men; and this proportion is the more striking, if we recollect that the female population of London is much more numerous than the male, in the proportion of 120 females to 100 males, or about five males to six females." (pp. 595-6.)

Mr. Acton gives some interesting cases of a peculiar form of monomania, to which M. Ricord has applied the name of Syphiliphobia.

Syphilis in Infants. What is said on this subject deserves attentive study; we can merely indicate the points which Mr. Acton argues and illustrates. A woman may contract syphilis during the time she is pregnant, and infect her infant, the father being healthy; but the latest period at which this may occur is not ascertained. A man labouring under secondary syphilis may beget an infected infant, the mother remaining free. A mother labouring under syphilis may suckle her child without giving it the disease. Mr. Acton does not believe that a nurse labouring under secondary symptoms can infect a child. He thinks that an infected fœtus may contaminate the mother, and relates a case, which, however, is not conclusive. Mr. Acton does not believe that an infected infant can contaminate the wet nurse. We cannot assent to all of these propositions; but on the present occasion we have no space for a statement of our own views.

We have now brought our task to a termination: and, in taking leave of Mr. Acton, we feel that it is our duty to commend his work most cordially to the notice of our readers. Our analyses show that the book is essentially useful and practical; and we have left untouched much that is alike interesting and important. Still it is not faultless. The style is too diffuse, and almost every chapter would bear condensation with advantage. There are also too many typographical errors and literary inelegancies. Notwithstanding, however, its blemishes, Mr. Acton's work is the most useful in our language upon the subjects of which it treats.

An Inquiry on the Subject of Vaccination, Addressed to the Royal Medical and Chirurgical Society. By Benjamin Ridge, M.D. pp. 31. London: 1851.

This pamphlet is in a great measure made up of quotations, about one half of it being composed of extracts from the works of Dr. Jenner, and from a previous essay of the author. Dr. Ridge does not appear to think very clearly; and from this or from some other cause, he has failed to present his views in a perspicuous manner. As far as we have been able to deduce them from the work itself, they may be thus stated:

Dr. Ridge, aware of the recurrence of small-pox after Vaccination, and knowing that this result had been made use of to disparage the practice altogether, brings forward a theory of his own to account for the failure of the operation, and to show that an unsuccessful result is not dependent on any inherent want of prophylactic virtue in the cow-pock, but arises from the choice of unsuitable periods for its employment. According to an alleged discovery of Dr. Ridge, in 1842, and published in 1845, two membranes, not previously known, were found by him to exist in the fœtus, and young of man and other animals. The first was described as a true membrane for the meconium; the second, as a vascular network of vessels, lying between the meconic membrane and the true mucous membrane of the intestines, forming also a true membrane, named the rete vasculare. The use of the

meconic membrane, according to Dr. Ridge, is "to detain effete matters within the alimentary canal, instead of their lodging on the mucous membrane, and to prevent the bile flowing into the alimentary tube, where it could have no duty to perform, as chylification is not necessary to fœtal life." He adds, "were it not for the intervention of these new structures, there would be no hindrance to the absorbents acting on the contents of the bowels, and taking up and carrying into the system an excrementitious deposit. The meconic membrane is plainly a false mucous membrane, which is present for a certain time only, and for a specific purpose, as we find that that portion of it which is situated on the rectum, comes away, in some instances, entire with its contents, as a cul de sac; though probably, in the more numerous cases, it breaks and comes away piecemeal with portions of the meconium. The rete vasculare appears to be provided by nature, for the nourishment of the meconic membrane, as well as the mucous membrane on which it lodges, and to sustain the functional integrity of both during fœtal life. And if these new structures perform highly important duties during fœtal life, they appear to have equally important uses after birth. From this period, all animals are as dependent on what they make within themselves by the decomposition and appropriation of their own tissues, as on what they take of foreign substances to support life. The action of the oxygen imbibed, on the animal tissues, constantly consumes them; and these, being in an hourly stage of decomposition, produce carbon which they breathe, and ammonia, which generates nitrogen, the active and primary agent of their whole vital system. What is there to interpose between the metamorphosis of existing tissues in the new-born child, supposing, as we have hitherto done, that there are no such structures as the meconic membrane and rete vasculare?"

The existence of these membranes, which Dr. Ridge thinks he has discovered, is a question of fact, not yet confirmed by any one; and the theoretical purposes they are alleged to subserve in the animal economy, we have given in the words of the writer himself, for, not very clearly understanding his views, we fear we should fail in conveying any very distinct impression to the reader. But it will naturally be asked, "What has all this to do with vaccination?" The writer shall again speak for himself. "From what I have said in connexion with the presence of the meconic membrane and rete vasculare, it will be seen that light diet, with free air and oxygen, so act upon these structures, as to support life vigorously and healthfully; *and in doing this, infants are more able to throw off or avoid diseases of a character like the small-pox.* If infants, therefore, have this innate power of counteracting natural diseases, *they have equally the power of throwing off* that which is thrust upon them, or *whatever they are inoculated with.*" The writer adds, "I do not think that there is as much dependence to be placed in the preventive action of vaccination, if performed within the first three months, as when it is done after that time; and, if it must be done previous to this time for the parents' satisfaction, it should be done again within the year for the child's safety." Dr. Ridge further adds, "No child that I have attended during the last two years, has ever had the small-pox in that time; and none that I have vaccinated after the age of three months have failed in taking the virus. Before that age, the proportion was large of those I had to revaccinate a second and even a third time. What then was the cause why these threw off the vaccination, unless indeed it was the power of the healthy vital agents, in course of metamorphosis resisting the disease?" or as he further states, "the great transition, and consequently resistive state an infant's secretions are always in during the influential presence of these newly discovered structures, particularly the rete vasculare" Further on, the writer extends the proper period for vaccination from three months to a much longer period. "From subsequent reflection," he says, "and experience, I am now prepared to extend that time to nine, or even twelve

months, as the safest period—because it is impossible to say at what precise age a child may have arrived at that condition of body, most appropriate for the reception of vaccine virus." Again, "the proper time for vaccination is that time within the year when it may be reasonably supposed, that, the newly discovered organism being disposed of, the transition state of the system is less active." We should not, however, by any means, advise our readers to defer the vaccination of their little patients from the fourth to the twelfth month, on grounds so fanciful as those adduced by Dr. Ridge, even though further inquiries should shew that the new tissues which he describes are really distinct and special organisms. For, granting this, the functions which he attributes to them are purely theoretical, and it will take a long course of observations to establish the doctrine, that for the first twelve months of its existence, an infant is usually in such a state of high health (transition state), as to resist the influence of the virus of the human or cow small-pox. The reader who consults the pages of Dr. Ridge, will therefore be astonished to find on how small an amount of proof he attempts to establish opinions so new, and which if correct, are of so much practical importance. His facts have little to do with the points at issue; and they bear a less proportion to his mass of theory, than Sir John Falstaff's half-penny-worth of bread to a gallon of sack. It is well known, that infants of a few days old may take both cow-pox and small-pox. Why does Dr. Ridge fail to notice this class of cases?

We shall now conclude by noticing a very questionable assertion of the writer, viz., that "Virus allowed to dry between two pieces of glass, is deteriorated or destroyed, by crushing molecular continuity." This assertion is not likely to pass current in the sister isle, where the practice, both in the Dublin Vaccine Institution, and throughout the country, is to preserve the virus in the manner denounced by Dr. Ridge. In Scotland, also, and in extensive districts of England, Wales, India, America, and the British Colonies, it is the method most commonly adopted.

Principles of Physiology, General and Comparative. [*With* 321 *wood engravings.*] By William B. Carpenter, M.D., F.R.S., F.G.S., etc. *Third Edition.* pp. 1098. London: 1851.

This is a book without a rival: and Dr. Carpenter has laid the medical profession, as well as all who study and who love natural history, under deep and lasting obligations by its production. Our limits forbid us from indulging in comment or criticism; and we can only heartily commend the work to our readers.

We regret to observe from the preface, that the author does not even hope for any pecuniary recompense for the great amount of successful labour bestowed upon his book. We perused the following paragraph with interest, and much regret. "The whole of his" (the author's) "disposable time has been devoted to it for nearly two years, not merely without the anticipation of the slightest pecuniary reward, but under the certain loss involved in the relinquishment of other literary engagements of a remunerative character: and the sale of the entire edition will not do more than remunerate his liberal publisher, for the very large outlay which he has incurred in the production of the work, and more especially for the beautiful series of illustrations with which it is embellished, most of them having been executed expressly for it by Mr. Bagg." *(Preface.)*

The Laws of Health in relation to Mind and Body: a Series of Letters from an Old Practitioner to a Patient. By Lionel John Beale, M.R.C.S. pp. 306. London: 1851.

This is a sound and sensible book, which, if generally circulated, is likely to do much good. Though not beneath the perusal of the profession, it is more adapted to the wants of educated laymen.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

THERAPEUTICAL REVIEW OF TREATMENT ADOPTED IN THE DISEASES OF THE NERVOUS SYSTEM.

From the *Annales Medico-Psychologiques* for April 1851, p. 322.

Ferruginous Preparations in Chlorosis. The action of iron in the cure of chlorosis has long been known ; and its efficacy in this disease places its preparations in the rank of the most energetic medicines. But the same compounds do not suit all patients. There are some which produce upon chlorotic patients curative effects, which they have never succeeded in producing upon others. Hence arises the necessity of varying the administration of the compounds which have iron for their base. Here the following question naturally presents itself : Chlorosis being a blood-disease, it ought not to be classed with nervous affections, and the therapeutics of these last diseases has nothing to do with chlorotic affections. It is not proved, however, that the primary cause of chlorosis does not reside in the nervous system, and that it is not a particular modification of the nervous apparatus of digestion and assimilation, which impoverishes the blood and impresses upon patients that physical and moral character, which it is impossible to mistake when once it has been seen. Thus chlorosis, and many other diseases, belong to the department of psychology : and it is probable that they will be included successively in the ranks of affections of the nervous system, in proportion as we advance in the study of this class of diseases.

M. Sandras has treated some chlorotic patients, who had sunk by loss of blood to an extremely advanced state of decay, and a kind of stupidity, by the daily administration of ferruginous pills, with calcined magnesia, baths at twenty-five degrees (77° Fahr.) every two or three days, and the use of substantial food. By this treatment, the most severe symptoms disappeared very readily, and there remained no trace of chlorosis.

The iodide of iron, and iodo-ferruginous pills, have produced good effects in cases in which the ordinary preparations of iron, as the carbonate, the lactate, etc., did not produce any advantageous results.

Iron is not, according to M. Hannon, the only metal which succeeds in curing chlorosis. He has employed preparations of manganese with success. But he has since discovered, that neither manganese nor iron were assimilated : that they were eliminated, and that, consequently, they had no influence in the cure of chlorosis. The iron found in the blood would result from the food, and not from the remedies which were administered.

Gastralgia. Treatment by the Subnitrate of Bismuth, united with Belladonna. The subnitrate of bismuth enjoys a certain reputation in the treatment of gastralgia. It cannot be said, however, to be an active and faithful remedy. Sometimes it does not act even in a large dose ; at other times, its action is no longer exercised in cases where it had previously been administered with success. According to Professor Caizergues of Montpellier, the subnitrate of bismuth is more efficacious when it is united with belladonna. He orders this mixture in painful affections of the stomach, properly so called, and which are isolated from all inflammatory complication, and against affections of the stomach which are connected with a positive disease, or a general morbid state, like chlorosis, for instance. The Professor generally employs the following formula. ℞ Subnitrate of bismuth ten grammes, extract of belladonna one gramme ; make forty pills, two to be taken night and morning.

Lead-colic : Utility of Belladonna. The exclusive purgative method has its advantages ; but it has also its inconveniences. It is directed against poisoning ; for in provoking catharsis, it drives out, by over-exciting the excretory organs of the intestinal system, a part of the poison absorbed, and then it destroys the obstinate constipation which is one of the most marked characters of lead-colic. But antispasmodics supply a want, since the sensibility is energetically called into operation in this disease. The narcotic method may then have some success, and does not deserve to be entirely abandoned to give place to the purgative method. Stoll was a partisan of the pure narcotic method. Dr. Triberti of Milan employs the mixed treatment, in which opiates are administered internally and externally in a full dose, and with such success, as to obviate the necessity of having recourse to purgatives. When narcotics alone are sufficient for the cure, the mixed method becomes the pure method. M. Marion, physician of the Hôtel Dieu, at Nantes, has administered the extract of opium with great success in the dose of 30 to 60 *centigrammes* (gr. ivss. to gr. ix) a day, like Dr. Triberti ; the pains quickly ceased, and, with a small dose of castor-oil and some emollients, the constipation likewise disappeared. M. Malherbe thought, in 1846, that belladonna might be advantageously substituted for opiates. Since the trials of treatment by this method, the success appears to have been sufficient to cause its adoption. The following plan is adopted by M. Malherbe, in the belladonna treatment : on the first day, five *centigrammes* of the extract, with 10 *centigrammes* of the powder of the root. When the first dose is without effect, that is to say, when neither the pains nor the constipation have diminished, the second is composed of 10 centigrammes of extract of belladonna with 20 of the powder. At last, M. Malherbe has gone as far as 20 centigrammes of extract, with 40 of the powder ; but he has not carried the dose farther. With this treatment, the greater number of patients have been relieved, from the first to the third day ; in the cases in which the symptoms offered a great resistance, and could not be subdued by opium, belladonna has triumphed. Belladonna is considered by M. Malherbe as an antispasmodic, and anticonstipant.

Enteralgia, or Nervous Colic. Treatment by Alum. The sulphate of alumina and potash has its advocates in the treatment of lead-colic. MM. Kapeler and Gendrin, and M. Brachet of Lyons, have been successful with this drug. The analogy of the symptoms of lead-colic and nervous colic, has suggested to M. Philipeaux, the employment of alum in this latter disease. The treatment consists in employing four *grammes* (3 i) of alum dissolved in a soothing potion, and given in spoonfuls. But, in order that the remedy may act efficaciously, and that it may not, on the contrary, produce an exasperation in the morbid state, there must be neither frequency of the pulse nor symptoms of intestinal strangulation ; the colic must be purely nervous,—a fact which is often difficult to be ascertained.

Ammonia — its Efficacy in Hoarseness and Aphoni : Imperial Potion. After having disembarked at Cannes, on his arrival from the isle of Elba, and while he was stretching to Lyons, the Emperor Napoleon was seized with a sudden hoarseness. The next day he was to make his entry into Paris, where he had fatiguing duties to expect, for there would be orders to give, reviews to superintend, deputations to receive and to harangue. The emperor was forced to pay with his own person for the success which was to open to him, without a battle, the gates of the capital. He sent for his physician, Dr. Foureau de Beauregard, and declared to him that he must be positively relieved of his hoarseness. The physician prescribed the following draught : ammonia 10 drops, syrup of erysimum 45 grammes, infusion of tilia 100 grammes ; to be taken at one dose. Foureau related that the cure was sudden, which procured him the thanks of the emperor ; hence the name of *imperial*, which has been given to the potion. It is possible that, in

this imperial potion, the ammonia may, by its diffusive properties, modify favourably an inflammatory state, or a state of nervous excitement.

Eclampsia: Treatment by Ammonia. A lying-in patient, who had lost much blood, had an attack of eclampsia. The ordinary means not producing any result, Dr. Vanoye ordered a potion containing some drops of spirit of ammonia, with some syrup of mint. The convulsions diminished a little; and, as they were reproduced at the termination of an improper bleeding, the same means were repeated, and they finally disappeared. Although ammonia appears to be indicated in cases of eclampsia, it may fail to produce the effects which we may expect, particularly when the hæmorrhage has been considerable; for then the medicine may cause a state of over-excitement, and deceive us in the result which we think to attain.

Delirium Tremens: Ammoniacal Potion. Delirium tremens is frequently developed in wounded persons who have used spirituous drinks in excess. This disease is efficiently combated by opiates; but, according to M. Jobert, it is prevented by the administration of the following mixture. Distilled water of tilia 128 grammes, ammonia 4 drops, syrup 32 grammes. This potion is given in spoonfuls every two hours, to patients who have received wounds during intoxication; and to those who, having been addicted to drinking, present, during treatment, a state of exaltation sufficiently marked to cause us to apprehend an attack of delirium.

Chorea: Treatment by Chloroform in Frictions. Chloroform is an agent which will eventually become an extremely powerful instrument in obtaining very varied results. Since it deadens sensibility, it must calm and even completely appease the different states of over-excitement of the nervous system. We cannot therefore be surprised that Dr. Gassier has performed three cures of chorea by making, along the course of the vertebral column, frictions with a liniment composed of chloroform and oil of sweet almonds, in equal parts. But what is remarkable in these three cases is, that they were all caused by fear. Thus, then, there did not exist any initial morbid state; an accidental nervous derangement was developed on a particular occasion, and nothing more. In such circumstances, chloroform has stopped the chorea; but if the temperament had been concerned, as in cases which are developed without appreciable moral cause, chloroform would not have sufficed, but it would have been necessary to have recourse to other means.

LEMON JUICE IN ACUTE ARTICULAR RHEUMATISM.

In a certain class of cases, we believe the treatment of rheumatism by lemon juice, as advocated by Dr. G. O. Rees [London Journal of Medicine for 1850, p. 927], to be most satisfactory. For this reason, we state that it is being tried with good results both at home and abroad. Dr. Perkins of Brussels, and Dr. Giraud of Grenoble, have lately testified in its favour. (Vide *Journal des Connaissances Médico-Chir.*, Nov. 1850, and 16 May, 1851.)

AUTUMNAL DIARRHŒA.

As this disease is likely soon to be more or less prevalent, we would invite our readers, in those cases—and they are not few in number—in which may be traced an intermittent type, to combine the use of quinine with their other remedies. In our own practice, we have found nothing so successful in the majority of cases as an opiate draught, followed in two hours by a full dose of castor oil; and then a short course of quinine with minute quantities of iron. Dr. James Bird, two years ago, said, "Dr. Cormack, of Putney, informs me, that acting on a suggestion which he (Dr. Bird) had made to him, now nearly twelvemonths ago, he has found the citrate of iron and quinine one of the most useful medicines which can be given in the *cholerine*, now almost

universal on the Surrey side of the river". [London Journal of Medicine, 1849, p. 842.] Dr. J. P. Evans, of Tazewell, Tennessee, in an Essay on "*the Diarrhœa of the South*," in the *Charleston Med. Journal and Review* for May 1851, writes as follows:—"While in Mexico, I was furnished with various *recipes* for diarrhœa, of the precise elements of which I made no record, but some of them emanated from respectable sources, and I noticed that quinine entered into the composition of many of them, particularly of some which were reputed to be of great value in the region of the Rio Grande." . . . "It is very probable that it (quinine) might be profitably employed even where periodicity could not be traced, as, according to Professor Drake, it is a sedative and antispasmodic narcotic."

DR. PANUM ON THE TRANSMISSION OF MEASLES.

The *Archives Générales de Médecine* for April 1851, contains a memoir by Dr. Panum, of Copenhagen, on an epidemic of measles, which visited the Færoe Islands from April to October 1846. The article originally appeared in the *Archiv für Physiologische Heilkunde.*

Extraordinary facilities for making accurate observations were afforded to Dr. Panum (who, with Dr. Manicus, was sent to the islands by the Danish Government), by the circumstances, that not a single case of measles had occurred there since 1781; that the islands are separated from the rest of the world, both by their geographical position, and by a peculiar commercial monopoly in force there; that the islanders are congregated into small villages, of at most two hundred inhabitants,[1] having very little intercourse with each other; and that intercourse was rendered still more rare by the fears excited by the epidemic of measles. Out of 7,782 inhabitants, more than 6,000 were attacked; and, in some of the villages, more than 80 per cent. of the peasants were at the same time confined to bed.

Dr. Panum makes the following remarks on the period of incubation in measles:

The duration of the period of incubation in measles has not been satisfactorily determined: it would vary, according to authors, between eight, ten, and fourteen days. Some physicians, more cautious, refuse to assign a fixed duration to the first stage. In large towns, it is impossible to know the precise moment at which an individual is subjected to contagion: sufficiently accurate results can only be obtained by being placed in such a position as I was in the Færoe Islands.

The first islander attacked with measles was a labourer, living at Thorshavn. He had left Copenhagen on March 20th, and had arrived in perfect health on the 28th; on April 1st, he was taken ill. About fourteen days later, his two most intimate friends had the first symptoms of measles. This case, which I did not witness, awakened my attention, and led me to undertake researches on the duration of incubation.

On June 4th, ten men of Tjornevig, in the same boat, took part in a large fishing excursion with the inhabitants of another village; on June 18th, all were attacked with measles, after having had premonitory symptoms from two to four days. They had only been in contact with some fishermen from Westmannhavn, who were convalescent from the same disease, or who had at least lived among others who had measles. Twelve or sixteen days after the appearance of the eruption in these persons, almost the whole population of the village was attacked. This was already sufficient reason to lead me to suspect that the contagion may remain in the organism in a latent state, or at least without giving rise to a specific eruption, during an average period of thirteen or fourteen days. I collected accurately, in fifty-two localities, the names of the persons who were first attacked, the date of the eruption,

[1] Thorshavn, the seat of government, contains 800 souls.

and the date of the attack in the inhabitants to whom the disease was communicated. These observations all tended to confirm my supposition.

At Hattervig, a young man, the first who was attacked, assured me that the eruption appeared on him ten days after his arrival from an infected village. This was an exceptional case; but the patient himself afterwards contradicted the false account which he had given me. At Fuglefiord, the daughter of my host had recovered from the disease, from which the nine other members of the family had remained free. I inquired on which day the exanthem had appeared on her; and underlined the fourteenth day in an almanac, telling them that that was the period at which the disease should re-appear. On my return, I learned that the eruption had appeared on all the nine individuals on that day.

The Great Dimon is a very small isle, inhabited by only eighteen persons, of the same family. Some of the men went one day in a boat to Tveraa, where the epidemic prevailed, and remained only a few hours. Up to the tenth day, these men remained in perfect health; on the fourteenth day, the eruption appeared on all; and fourteen days later, it appeared on all the other members of the family. At Skaalevig, the only isle where the houses are much isolated, the contagion spread less rapidly; but it still afforded a confirmation of the rule which I have laid down.

It may then be admitted, as a constant law, that the contagion of measles, when introduced into the organism, does not manifest itself at once; and that, after a premonitory stage of uncertain duration, the eruption appears on the thirteenth or fourteenth day after the infection. Without doubt, the constitution, regimen, etc., of the patient, will somewhat hasten or retard its appearance; but their influence is much less than might at first be supposed. The greatest variation did not extend beyond twenty-four hours. . . . According to observations made at Copenhagen, the period of incubation of small-pox is fourteen days: the analogy which these two eruptive disorders thus offer is interesting.

The indeterminate duration of the precursory catarrh would seem to throw some incertitude over my researches. Some patients suffered from cough, slight ophthalmia, and febrile disturbance, six or eight days before the eruption; others only perceived these symptoms for four or six days; and most, indeed, did not experience them more than from two to four days. Exact results can only be arrived at, by comparing the time of infection and that of the appearance of the eruption.

If we admit that the incubation of measles lasts from thirteen to fourteen days, and that this period elapses between the appearance of the eruption in an individual, and its subsequent appearance in those infected by him, is it not evident that contagion takes place during the period of efflorescence? Measles certainly are not contagious during the latent stage; and it is difficult to decide whether they are so during the precursory stage. They are generally believed to be especially contagious during the period of desquamation. For my own part, I have not seen a single case to convince me that this supposition is correct. The transmission, if the duration which I have assigned to incubation be correct, is, almost always, if not constantly, effected when the spots make their appearance. In no case which I witnessed, was an individual attacked with measles more than fourteen days after the disappearance of the exanthem in those who might have infected him. In a word, measles are very contagious at the commencement of and during the eruption; it is doubtful, on the contrary, whether they are so in the catarrhal and desquamative stages.[1]

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[1] Dr. Panum by no means proves that measles are not contagious during the period of desquamation; and some of the instances which he relates rather tend to confirm the opinion which we entertain—that they are so. Thus, the ten men of Tjornevig, to whom he refers, " had only been in contact with some fishermen

With regard to second attacks of measles, it is remarkable that all the old people in the Færoe Islands, who had been attacked in 1781, and who were still numerous, escaped in 1846: I could cite a hundred instances. This observation is the more conclusive, as even very advanced age did not diminish the susceptibility. As far as I know, very aged individuals, who were not exposed to the first epidemic, were all affected by the recent one; while some young persons escaped, though living among the sick.

The following facts may throw some light on the question, as to the degree of intensity which may be attributed to the contagious principle of measles. On June 2nd, some men embarked at Funding for Klaksvig, to buy goods: the buyers could not return, until they had assisted in unloading a vessel, on board of which were men just recovered from measles, which also prevailed in the port. The people from Klaksvig entered no house but the counting-house. On their return, they threw away the coverings of their goods, washed themselves carefully, and put on other clothes, etc. No one was attacked till July 3rd, when the disease appeared at Klaksvig. Five inhabitants of Nordre-Gjov, who did not take the same precautions on their return, after having been exposed to the same influence, were seized on the fourteenth day from their exposure to the contagion.

On my arrival in Klaksvig, the terror was so great, that no one would approach me, although the islanders do not commonly believe that medical men convey contagious miasmata. Three weeks before Whitsuntide, the surgeon of the country had to pass the night in the village, in attendance on a patient; the measles appeared fourteen days after, in the house where he had been. No inhabitant, either of the house or of the country, had had communication with an infected place; and no other stranger had come into the village. At Midtvaag, the measles were introduced by a midwife, who had attended the patients in a neighbouring island. The young girl who washed the midwife's linen was the first person attacked. These instances tend to show that measles possess a greater power of contagion than is generally supposed.

Whatever may be the value of simple prophylactic measures, isolation is without doubt the surest method of arresting the development of the disease. Houses have been preserved from infection, in several villages, by interrupting communication. I will refer to two families at Saxen, ten at Midtvaag, ten at Sandevaag, and half the village at Thorsvig. Various localities, with populations varying from twenty-six to two hundred and forty persons, were preserved by a vigorous *cordon sanitaire*. About fifteen hundred islanders may be considered to have owed their health to the establishment of quarantines.

Of 6,000 cases, of which I saw and treated more than 1,000, there was not one which authorised me to admit the existence of morbillar miasmata. Everywhere the disease was propagated from man to man, from village to village; contagion, mediate or immediate, was evident. The two physicians who practised in the Færoe Islands, believed measles to be miasmatic, and capable of transmission by the air; hence no precautions were at first taken to prevent communication. Experience had already shewn, in 1781, what good could be effected by quarantines; but these were not had recourse to until too late. It is to be hoped, that the experience so dearly bought in 1846, will be profitable. The exclusively contagious nature of measles is so clearly proved, that the practitioner would, I think, fail in his duty, if he did not act accordingly.

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from Westmannhavn, who were *convalescent from measles*, or at least had lived among persons affected with them." Again, the infection of the men of Nordre-Gjov, after their visit to Funding, shows distinctly that measles can be taken from men "just recovering from them." We can scarcely imagine the convalescents at Funding to have been working on board a ship during the eruptive stage. Scarlatina and other disorders are contagious during the stage of decadence: the same may be reasonably expected in measles. [EDITORS LOND. JOURN. OF MED.]

EXTERNAL APPLICATIONS IN DROPSY.

The treatment of dropsy by the external application of diuretics was some time ago made the subject of an able article by Professor Christison, in the *Edinburgh Monthly Journal*. The following observations, by Mr. W. W. Finch, of Ausable Forks, New York, are contained in the *Boston Medical and Surgical Journal* for March 19, 1837:

Some six years since, I was called to see a child, two years old, with general anasarca and ascites. He had been under treatment some three or four weeks; but was steadily getting worse, and had been left by the attending physician as a hopeless case. His whole body was enormously distended; his features seeming hardly human. The appetite was voracious; he had constant thirst; the bowels were very loose; the urine scanty; the pulse feeble, quick, and very frequent; the patient was restless, and constantly moaning. The usual treatment with diuretics and cathartics would reduce the distension a little; but what was gained one day would be more than lost the next; for the patient was evidently losing strength, while the disease was steadily gaining ground. As a forlorn hope, I directed the following liniment to be applied to one half the surface of the body, three times a day. ℞. Volatile liniment, two parts; tincture of cantharides, tincture of digitalis, tincture of colchicum, tincture of iodine, of each one part. The patient was well in a few days, without taking a particle of medicine internally.

Since then, I have used the liniment repeatedly with advantage; several mild cases yielding to this alone, without any other treatment. The liniment is peculiarly adapted to the treatment of dropsy in old persons, children, or delicate females; where the powers of life are feeble, and the stomach and bowels too irritable to bear medicine internally.

I have lately treated another case similar to the one mentioned above:— the child having been more or less bloated for several months; the legs and body were as full "as the skin could hold". All appearance of disease was removed after a few days' use of the liniment.

That there is any especial virtue in the particular form or combination of remedies in the liniment, I do not believe; but that external remedies can be used with advantage in most cases of dropsy, I am sure.

TREATMENT OF CHOREA BY STRYCHNIA.

It is not irrational to use strychnia as a remedy in chorea, a disease which is undoubtedly cured by several other medicines, whose chief action is upon the spinal cord. We can even credit its producing some very striking recoveries; but, nevertheless, having in hospitals and elsewhere seen the hazards which attend the use of this medicine, we are not disposed to approve of the heroic plan of treatment recommended by M. Trousseau. The degree to which he pushes the medication actually amounts to poisoning, a proceeding which is never justifiable in therapeutics, when it can be shewn that other and safer measures have in like cases accomplished cures. Iron is a medicine which we have found not only safe, but also very efficacious in chorea; and one of the best forms of administering it is the citrate of iron and quinine. It may be well to make occasional changes, during the course of treatment, in the details of the medication, such as substituting the simple citrate of iron for the double salt, and giving a few drops daily of Fowler's solution of the arsenite of potash. It might not be wrong even to assist other remedies, in obstinate cases, by giving strychnia; but we would not take the responsibility of making the muscles of our patients rigid by it, to the extent advocated by M. Trousseau. The remarks at p. 54 of our number for January 1850, may be read with advantage, in connexion with this subject. The following is an abridgement of the paper of M. Trousseau, which has suggested the forgoing remarks.

Abstract of M. Trousseau's Memoir. M. Trousseau uses the syrup of sulphate of strychnia, containing five *centigrammes* of the sulphate in a hundred *grammes* of simple syrup (one grain to two thousand). The method which he follows is to give gradually increasing doses. According to the age of the child, he begins with two or three teaspoonfuls of the syrup for the first day, and the number is daily increased up to six. A dessert-spoonful is then daily substituted for a teaspoonful: when six have been reached, tablespoonfuls are then in like manner gradually substituted. The number of tablespoonfuls should be augmented beyond six, up to seven, nine, or ten, but more slowly, and at intervals of one or two days. These quantities should be regularly divided between the twenty-four hours, so that a portion may be taken every four hours. The dose should be increased so far as to produce tetanic rigidity; and this should be carefully watched for by the persons about the patient. When this appears, the dose must not be increased; and the quantity to be continued should be somewhat diminished. In general, the daily dose of the medicine varies from two to ten *centigrammes* (gr. $\frac{1}{3}$ to gr. iss).

One of the first symptoms of the tetanic effects of the strychnia is, itching of the hairy scalp and skin. The masseter muscles are first attacked; and when the patient complains of difficulty in opening the mouth, the dose should be continued, but not increased, as the medicine has a tendency to accumulate its effects. Sometimes there will be, after some rigidity, an interval of two or three days without any marked change; then tetanic symptoms will set in with alarming severity, as if the medicine had been accumulating. In other cases, the doses being the same, the effects will be much greater on one day than another: this may probably be due to meteorological influences. These irregularities ought to be borne in mind by the physician.

Sometimes the dose is not arrested when the first tetanic symptoms appear. The masseter muscles then become so rigid as to impede the speech; next, the patients are often seized with sudden cramps of the legs; and, when they attempt to walk, the body moves forward while the legs remain fixed, so that they fall to the ground. In other cases, instead of persistent tetanic rigidity, there are sudden contractions, so that the patients are thrown down by the rapid action of the triceps femoris muscle. The rigidity, and especially the contractions, appear when the patients make any sudden movement.

The medicine should be continued some days after the choreic symptoms have disappeared, in order to prevent relapses. In above ten years, M. Trousseau says he has seen no ill effects produced by the use of strychnia in the way he describes; and he believes it a safe and efficacious remedy, if carefully and properly administered. [*Révue Médico-Chirurgicale*, Jan. 1850.]

TREATMENT OF CHLOASMA HEPATICUM BY THE EXTERNAL APPLICATION OF TINCTURE OF WHITE HELLEBORE.

Dr. Lilienfeld, having proved the inefficacy of most medicines used as remedies for hepatic spots, and reflecting on the frequent employment of lotions of veratrum album in cutaneous affections, has been led to have recourse to the tincture of that plant, and has obtained most perfect success.

In the first place, especially when the bowels are at all constipated, a cathartic is given; and the patient is then made to use tepid soap and water baths for three or four days, to soften the skin. He is then directed to apply daily, while lying down, some of the tincture of hellebore to the coloured spots, and to wash these parts the next morning with hot soap and water, rubbing them well with a flannel. After three days, the spots usually commence to become pale, and diminish in extent; and, in a very short time, they are generally effaced. Relapses have occurred in no case.

One or two ounces of the tincture of white hellebore are sufficient for each patient: it should be made with the fresh root of the plant, and with alcohol of specific gravity ·830. [*Révue Médico-Chirurgicale*, Jan. 1850; from *Vierteljahrschrift für die praktische Heilkunde.*]

SURGERY.

PROFESSOR BOCK ON GENU VALGUM, OR KNOCK-KNEE.

The following is a translation of a paper published by Professor Bock in a Danish journal, the *Bibliothek for Læger*, for October 1850.

The most common deformities of the knee-joint may be arranged under the four following heads.

I. Contraction of the knee *(contractura genu)* is the name given to the condition in which the knee is in a state of abnormal constant flexion, with considerable, little, or no power of motion in the joint.

II. Recurved knee *(genu recurvatum)*. Here the knee is in a state of superextension, and the popliteal space forms the apex of an angle pointing backwards.

III. Genu varum, or bow-leg : called by the Danish wheel-leg *(Hjulbenet)*.

IV. Genu valgum, or knock-knee : in Danish, calf-knee *(Kalveknæet)* ; in German, goat's-leg *(Ziegenbein)*, X-leg *(X-bein)*.

The name genu valgum is borrowed from an imperfect analogy with pes valgus. In the latter, the foot is thrown outwards. In genu valgum, it is not the knee, but the tibia which is pressed outwards ; and the more correct denomination would therefore be tibia valga, if the analogy with the foot were preserved. The same is the case with genu varum.

Genu valgum has been but imperfectly described in surgical works. I have for some time been collecting materials for a more accurate knowledge of this deformity, and will now publish the results at which I have arrived.

The following is a list of the authors in whom I have found genu valgum slightly alluded to.

Andry. L'Orthopédie, ou l'art de corriger dans les enfans les difformités du corps. Paris : 1741. 8vo., avec figures. Tome i, p. 280.

Naumburg (J. S.) Abhandlung von der Beinkrümmung u. s. w. Leipzig : 1796, pp. 50.

Heidenreich (F. W.) Orthopædie, oder Werth der Mechanik zur Heilung der Verkrümmungen am menschlichen Leibe. Berlin : 1827.

Delpech (J.) De l'Orthomorphie par rapport à l'espèce humaine. Paris : 1828. Avec atlas.

Mellet (F. L. E.) Manuel pratique d'Orthopédie, etc. Paris : 1835.

Heine (J.) Beobachtungen über Lähmungszustände der unteren Extremitäten und deren Behandlung. Stuttgart : 1840.

Bonnet (A.) Traité des Sections Tendineuses, etc. Paris et Lyons : 1841.

Pathology. In the normal condition, the knee-joint deviates from the long axis of the lower extremity, on account of the greater extension downwards and inwards of the inner condyle of the femur. The thigh-bones hence converge downwards, especially in females, in whom the pelvis is wider, and the neck of the thigh-bone is larger and directed more outward. It is the unnatural exaggeration of this condition to which the name of genu valgum is given. It might be supposed, that this affection is more frequent in the female sex : such, however, is not the case, for it is far more rare in women and girls than in men and boys. Both knees may be affected, but one is generally more so than the other ; and it is then almost always the right knee which is the chief seat of the disease. When one knee alone is affected, it is the right in about twice as many cases as the left. The origin and progress of the disease are gradual and almost imperceptible.

The knee forms the apex of a triangle, the other angles of which are at the ancle and the great trochanter, so that the base consists of the straight line which may be drawn between these points. The altitude of the triangle, or the perpendicular line from the knee to its base, points out the greater or

less degree of the disease ; this may naturally be denoted by the anomalous proportions of the angle at the knee, which, from being very obtuse, becomes, in the more advanced stages, a right or even a very acute angle.

On examining the knee, the following changes are found. On its anterior surface, the united large tendons of the extensor muscles, and the ligamentum patellæ, are found much stretched ; and the more so, in proportion as the knee is bent backward as well as inward. The patella is displaced outwards ; so that, in a more advanced stage of the disease, it rests on the external edge of the knee, in front of the condyles of the femur and tibia. The knee loses its natural convexity forward, and becomes acute-angled on its anterior and outer edge ; and the anterior part which lies more interiorly forms a plano-convex region in front of the inner condyle. On the outer surface of the knee, or in the angular bend, we often find the tendon of the biceps much stretched, as well as one or two portions of the external ligaments extended into sharp strings. The external condyles, both of the femur and of the tibia, are small, and can scarcely be felt in the more advanced stages of the disease. When the curvature is very remarkable, there is a transverse furrow in the skin on the exterior part of the knee. The natural hollow of the ham is obliterated ; and the posterior surface of the knee-joint is more or less plano-convex. The inner surface of the knee forms the obtuse apex of the angle ; and here the internal condyles of the femur and tibia are felt always prominent, usually hypertrophied, and, in rachitic cases, enormously swelled.

The condition of the whole extremity is at the same time changed. The thigh assumes an oblique direction downwards and inwards, towards the opposite knee. The knee is directed inwards, against or behind the sound knee, and the shin-bone assumes a direction downwards and outwards, so that the foot is at a great distance from that on the sound side. As the disease advances, the direction of the foot is changed : but this will be treated of under the head of complications. In children, where the affection is of a truly paralytic nature, and has followed convulsions, there has been constantly observed a sinking of the temperature, as much as two degrees, in the diseased limb. In grown persons, I have not found this symptom. In consequence of the bending of the limb, the distance from the pelvis to the sole of the foot is diminished ; the direction of the pelvis in walking consequently becomes oblique, so that the anterior superior spine of the ilium may be found an inch lower on the affected than on the sound side. This obliquity of the pelvis becomes gradually permanent, so that it is observed both during walking and standing. In cases where the deformity has not yet reached a high degree, and in children, the limb can generally be brought back with the hands to its natural position : but the tension is felt to increase in the biceps femoris and external ligament of the knee-joint ; and, when the force is removed, the limb instantly resumes the bent position. In rachitic cases, not only the internal condyle of the femur, but also, in a still higher degree, that of the tibia is enlarged. The concavity inwards, which is naturally formed by the tibia, is obliterated : and, in the more advanced stages, there may even be a pretty conspicuous convexity, so that the whole extremity more resembles a bow curved inwards than an angular bending. The knee-joint generally retains its mobility. In the higher degrees of curvature, this is indeed somewhat limited ; but either true or false anchyloses are seldom met with as consequences of the affection of the knee which has been described.

When both legs are curved, the right leg is always slightly more bent than the other, and the apices are turned towards each other. This has given rise to the German designation of the disease—X-leg *(X-bein)*.

In this affection, the patients halt in a peculiar manner. If one bone only is affected, there is lameness—(*a*) because one extremity is too short ; (*b*) because the foot of the diseased limb falls beyond the centre of gravity of the body ; (*c*) because the affected knee, in walking, both hinders the free

swinging motion of the healthy knee, and is in its turn impeded by the latter. Each of these causes has distinct results, which modify both the direction of the limb and the lameness. When the extremity is too short, there is a natural attempt to compensate the defect; and this is effected partly by the already mentioned obliquity of the pelvis, and partly by the formation of a curve in the healthy leg. In healthy individuals, who have for some time had genu valgum, there will almost always be found a slight but true contraction of the knee in the sound leg. But in children, almost without exception, the other knee will become curved, either as genu varum or valgum. The outward direction of the tibia and foot causes the peculiar up-and-down lameness to become rotatory and swinging, like mowing, and this swinging is increased, to prevent the collision of the knees during walking. In the more remarkable modification, the body seeks to maintain its equilibrium; and it attains this object more completely than in many other forms of lameness—*e.g.*, from congenital dislocation of the thigh. This is partly affected by the position of the pelvis, and partly by a greater degree of mobility in the lumbar vertebræ. The diseased leg is generally sufficiently powerful, in persons affected with genu valgum, to enable them to walk for some distance. Naumburg has compared their gait to that of ducks; but this is scarcely correct. The gait is more swinging than waddling, as in persons with rachitic distortion of the pelvis or double congenital dislocation of the hip-joint. The patient who has genu valgum in one leg, endeavours, while standing, to preserve the centre of gravity by moving the sound leg somewhat outward beyond its natural position. Hence the points of support in the feet are at a greater distance from each other, and the surface within which the centre of gravity of the body can fall is greatly increased. Patients with double genu valgum usually, when standing, support the knees against each other, so as to form there a mediate resting point for the body, while the feet stand out from each other.

Complications and Secondary Deformities. These are more various in this than in any other deformity whatever. Where the disease has commenced in youth, a curvature of the spinal column will generally be produced by the obliquity of the pelvis and the lameness. The affected limb is not unfrequently more or less atrophied. Anchylosis of the knee-joint rarely occurs, unless some chronic disease have preceded or accompanied the deformity. I have, however, seen two cases of anchylosed knock-knee in elderly persons; in these the limb was also directed backwards. But it is the feet which are especially influenced by the gait produced by genu valgum; and hence knock-kneed patients have, almost without exception, some deformity or other of the feet. The patient may, in consequence of the abduction of the tibia, tread and walk on the inner edge of the foot, which hence often becomes callous. Hence there is a disposition to flat-foot, which is the most frequent complication. But, almost as frequently, the genu valgum is complicated with club-foot; and, as the shortness of the limb leads the patient instinctively to endeavour to touch the ground with the points of his toes, it is evident that these forms will be accompanied by a greater or less degree of talipes equinus. It has been hitherto impossible to determine the reason, why these secondary deformities of the feet should in some cases assume one form, and in others another. In certain peculiar cases, the deformity of the knee is secondary. A patient in Dieffenbach's ward had had, from childhood, *cyphosis accurvata* of the lumbar vertebræ: in his youth, varus had been developed in both feet, and, in his sixteenth year, he had become knock-kneed in both legs. Not uncommonly there is genu valgum on one side, and genu varum on the other, accompanied by the same, or by distinct deformities in the feet.

Causes. There is no doubt that genu valgum may be congenital; this is, however, a rare occurrence. The causes of the development of the affection

in later years are partly external, partly internal, but most frequently both are combined. The greater convergence of the thighs in women may be supposed to be a predisposing cause ; and Lessing[1] says that this affection is more frequent in females than in males ; this is, however, incorrect, for the deformity is twenty times more frequent in the latter sex, than in the former. Scrofula and rickets may be considered as predisposing causes, especially the latter. It still more frequently produces genu varum, in which case the external condyles of the femur and tibia are most affected and enlarged, while a similar swelling of the internal condyles gives rise to genu valgum.

Genu valgum may, as a general rule, be considered as a disease of a paralytic nature, and its most usual cause as a depressed state of innervation. Hence the commencement of the affection is limited to certain periods of life, in which the nervous centres undergo a more than ordinary degree of disturbance, connected with the state of development. Genu valgum is developed either during the first dentition or during puberty. This rule is so constant, that the only exceptions are the cases in which some local malady has given rise to the deformity : but these are comparatively very rare. In children, the disease has always, in my cases, arisen between the eighth month and the completion of the second year, and has always been preceded by difficult dentition, with fever, convulsions, violent hooping-cough, or, as in one case, acute exanthematic fever. This agrees with what has been stated by Heine, with regard to nine cases of knock-knee observed by him. The external causes, which may give rise to the affection at this age, and under the circumstances which have been mentioned, are, that the children *walk* too early, or too soon after a weakening illness, while they have not yet recovered strength, or that they are constantly carried on one arm, by which one knee is pressed inwards.

Among 221 cases of genu valgum, which I have observed, 17 originated during the first dentition. In a few instances, I have not been able to ascertain the period ; but in almost all the rest, or about 200, the deformity commenced between the fifteenth and eighteenth years, or at the time of puberty. In all these cases, there was an evident external cause for the deformity—the patient's position or occupation ; but the limitation of the age referred to above, together with the fact that many following the same occupation, under apparently similar external circumstances, do not become deformed, seem to shew that the external conditions are not sufficient to produce the disease, unless they meet with a corresponding disposition in the system of the individual, or rather in his development. We correctly consider the periods of dentition and of puberty as stages of development, in which the body is more obnoxious, than at any other period, to the hurtful operation of various extrinsic or intrinsic influences. That the deformity in question less frequently arises during dentition than during puberty, may be ascribed to the fact, that the influences above referred to, are more easily resisted by the system in the former than in the latter period.

This deformity is most frequent in smiths, joiners, bakers, and grocers. In 1846, there were in Copenhagen 644 smiths, among whom were

225 blacksmiths and anchorsmiths ; of whom 42 had genu valgum in the right leg, 7 in both legs=19 per cent.

359 locksmiths ; of whom 23 had genu valgum in the right leg, and 3 in both legs=7 per cent.

30 nailsmiths ; of whom 17 had genu valgum in the right leg, and 5 in both legs=73 per cent.

There were thus, in all, 97 cases of the deformity among 644 smiths, making an average of 15 per cent.

The following are the immediate causes of the frequency of the deformity among smiths. Almost all smith's work necessitates the long maintenance

[1] Lessing. Chir. Diagnost. Berlin : 1845. pp. 593-4.

of the same position, whether at the bellows, the anvil, or the vice; and, while standing in this position they often have to use much force, which leads them to seek a firm and solid footing. The feet are hence removed from each other, either both sideways, or one—always the left—forwards. In both these positions, any powerful effort will tend to produce genu valgum; for a great part of the weight of the body will, under the powerful movements of the arm and upper part of the body, act on the knee like a pressure from above and below. In blowing bellows, a work in which apprentices are generally employed, they must often stand uninterruptedly at work for several hours. At the vice and anvil, the left foot is placed forwards, the right backwards and rotated outwards, so that the toes are turned to the side. In this position they often stand with the leg and foot unmoved for several hours, while the upper part of the body is subject to constant and violent swinging, in order to use the file or hammer. The influence of the position on the knee will be easily seen by any one who will make a trial of it. Blacksmiths and anchorsmiths are besides constantly liable to have to bear heavy burdens. The fact that nailsmiths are most liable, in spite of their work being least laborious, is explained by the circumstance that they almost constantly use a kind of vice, which is fixed near the ground, and against which they all, without exception, place the inner surfaces of both knees, "because it is impossible for them to work in any other way."

Of 1340 journeymen carpenters, about 60, or 5 per cent, had genu valgum. It has been impossible to make very accurate observations on this class, as they endeavour to conceal the deformity as well as they can. It does not reach in them so high a degree as in smiths. Notwithstanding that the work of carpenters is less laborious than that of smiths, considerable exertion is required: most of the labour of carpenters, as sawing, planing, and polishing, requires the same positions as we have described in speaking of smiths. I have also observed that carpenters carefully watch for this deformity, and endeavour to prevent its development. Many masters have told me that they have had to set free their apprentices, or, in the first year, to caution them against habituating themselves to the posture which favours the commencement of the disease.

Of 334 journeymen bakers, 27 were knock-kneed; 24 were affected in both knees, the right being generally more bent than the left. One individual had the curvature only in the right knee. In 16, deformity had not reached a very high degree. Notwithstanding that bakers seem to be affected with this malady more than the other classes above-named, and several of them have some difficulty in walking, the deformity is not strongly developed. The disease does not arise from the position in which they stand while kneading dough; for in the first years, when this malady is developed, the apprentices are not employed at this labour. But the deformity is produced by standing at night at the board, often half asleep or contending with sleep, seeking for rest in the most varied positions; or partly by carrying water or sacks of corn. It is possible also that the great changes of temperature in attending to the oven may have some influence; but I consider the night-watching as the most essential cause, for the constant struggling with sleep produces a relaxation of the muscles. All the bakers in whom I observed genu valgum, also had flat-foot; and the latter deformity, in several cases, had preceded that of the knees.

The generally received opinion, that grocers' apprentices should be liable to genu valgum, from standing long, or from shutting drawers with their knees, I have not found supported by facts: for, among two thousand individuals of this class, I have in vain sought for any examples of this deformity. It is said to have been more frequent formerly; and what has most surely contributed to its removal, is the reform in working hours, it having been formerly the custom to keep the shop open much later at night, and to open it more early in the morning.

It hence results, that the general causes of this deformity are certain positions and habits, where these are often repeated, and especially at times when the body is more susceptible of their influence than at others. Other more accidental causes are, allowing children to walk too early, carrying heavy burdens, ulcers on the inner border of the foot, a burn on the outer side of the knee, resection of the upper end of the tibia, tuberculosis in the legs, caries, necrosis, rickets, syphilis, chronic abscesses, inodular bodies, etc.

The knee-joint is, properly speaking, a ginglymoid articulation, and its essential movements are merely flexion and extension; but the hinge-like movements are not so absolutely limited as in other analogous joints. The knee possesses a slight power of pronation and supination, but only when bent; and this power is dependent on the rotation of the tibia on its long axis, being limited, when the limb is extended, by the crucial ligaments. It is not connected with any peculiar apparatus, as in the rotatory movements of the radius and ulna, and may properly be considered as a slight twisting, which becomes possible on the tolerably flat upper surface of the tibia, when the knee is in such a position that rotation is not prevented by the extensor muscles. The knee has hence no power of abduction or adduction; and therefore the motions of this joint do not help to explain a deformity, which is characterised as an abduction of the tibia. Its immediate cause must be sought for in the parts which form, hold together, and strengthen the joint.

Although the part which these structures play in the production of this deformity is for the most part passive, the biceps femoris seems to be active in those positions in which genu valgum is chiefly produced, and to exercise the greatest influence on the increase, if not on the origin, of the deformity.

Supposing that one of the external influences which have been referred to should steadily act on the knee-joint, at a time when either convulsive disease (first dentition) or an unequally powerful development, perhaps in connexion with a rapid slender growth (puberty), have weakened the nervous system; then the parts on the inner side of the knee have no power of opposing the pressure outwards. They are overstretched and slackened; and thus the conditions arise for the commencement of genu valgum. The most important relaxation takes place in the internal lateral ligament, which is lengthened and thinned in its whole extent: in the more advanced stages, the four tendons on the inner side of the knee are also lengthened. On the other side of the knee, the tendon of the biceps, and both the external lateral ligaments, as well as the posterior, are strongly stretched.

When the deformity commences, the angle at which the biceps femoris acts constantly becomes more and more favourable to its increase. This is, however, still more favoured by the circumstance, that the weight of the body, which in the normal state is uniformly diffused over the upper surface of the tibia, is now transferred to the upper surface of the outer condyle of that bone. The inner condyle of the tibia, and that of the femur to some extent, are atrophied, even in cases which are not of rachitic origin. This hypertrophy is greater, in proportion to the youth or small size of the patient at the time when the deformity commenced. In rachitic cases, it sometimes attains an enormous degree. It is probable, also, that the internal semilunar cartilage is somewhat atrophied.

Prognosis. As genu valgum is a deformity which depends rather on relaxation than on any active contraction, the prognosis in general may be considered as scarcely favourable. It is, however, curable, when it comes under treatment in an early stage, and, which is more important, when the circumstances which have produced and kept it up can be removed. In young children, the knee can be brought with the hand into its normal situation; and in these the prognosis is most frequently good, when the necessary continued watching of the growth can be maintained, and when

the general condition of the child does not give a tendency to the continuance of the disorder, or to relapses. In young men, also, the deformity can be cured, when there are as yet no consecutive changes. But, under all circumstances, the removal of the deformity must not be looked on as complete; for, even when the curvature is completely removed, it will still be necessary to employ fitting means, to ensure the result desired.

Treatment. The treatment of genu valgum in young children, consists in mechanical means to keep the knee outwards; and this must be always supported by such general treatment, as the constitution of the child may indicate. The most simple apparatus is a splint, either straight or convex outwards, reaching from the hip-joint over the outer ankle, and fastened at the ends with circular bands. This apparatus, however, hinders the child from walking, and therefore can only be used constantly at night: hence it can only be used in the more unimportant cases. It is preferable to make use of a steel spring, convex outwards, furnished at the height of the knee with a hinge, fastened at the hip to a bow which can be stretched round the pelvis; just over the outer ankle, the lower end of the spring passes into another bow, which can be fastened round the tibia. The spring is furnished on the outside, through its whole length, with buttons, on which are fastened small leather straps, four or six in number. These are brought round the legs; and on the inner side of the knee they glide between flat *pelottes* which exert a pressure from within outwards, when the straps are stretched or buttoned. An apparatus of this kind may be worn for a long time, and its action gradually increased. It must be used for at least a year after the deformity is removed, and even then it must be gradually ascertained whether it can be left off.

The same apparatus, on a larger scale, and with greater strength of spring, can be used in grown persons. The patient can easily accustom himself to use it—indeed, he feels comfortable with it. In grown persons, it will generally be an indication, before employing mechanical treatment, to divide the tendon of the biceps, or of the most stretched fibres of the lateral ligaments, but generally only of the posterior lateral ligament. The mechanical treatment, after tenotomy, may appear tedious; but the result will be more perfect: but without great perseverance on the part of the patient, and careful watching of the deformity for several years, the treatment of genu valgum will in general be ineffectual.

CHRONIC OPHTHALMIA AND SPECKS ON THE CORNEA; THEIR TREATMENT BY SULPHATE OF CADMIUM AND TANNIN.

Fronmüller is in the habit of using, with great success, sulphate of cadmium, according to the subjoined formula:

Take of sulphate of cadmium, 20 centigrammes; distilled water of roses, 45 centigrammes; Sydenham's laudanum, from 2 to 6 grammes.

This collyrium is to be dropped into the eye.

Tannin is employed by Fronmüller in specks of the cornea, both in the form of collyrium and of ointment. The *ointment* is thus composed:

Take of tannin, from 40 to 60 centigrammes; prepared lead, 8 grammes. Make them into an ointment.

The *collyrium* is thus prepared:

Take of tannin, from 30 to 60 centigrammes; distilled water, 60 grammes; laudanum of Rousseau, from 2 to 4 grammes.

This formula is stated to be—though unchemical—very useful in chronic ophthalmia of an indolent character. The bottle requires to be kept well stopped. The tannin is a milder astringent, according to Fronmüller, than the mineral substances commonly employed in collyria. It produces a very powerfully astringent effect upon the vascular tissues. [*Annales d'Oculistique.*] The readers of the London Journal of Medicine may remember

that it was mentioned, at p. 1070 of our volume for 1850, that Dr. Cummings considers tannin superior to all other articles of the Materia Medica for astringent collyria, especially in purulent ophthalmia. The opinion of M. Hairion of Louvain of its great utility in similar affections was reported at p. 268 of the current volume.

SEPARATION OF WEB-FINGERS.

M. Pauli recommends the following method, in the *Medicinisches Corresp.-Blatt Bayerischer Aerzte.* The intermediate membrane is divided with a bistoury or scissors, close to one of the fingers, and in the whole length of the finger, till a little beyond the abnormal junction; the two fingers being at the same time forcibly separated by an assistant. In this way, enough of skin is left to cover one of the fingers; and the wound, being put up with agglutinative bandages, heals by the first intention. As to the wound of the other finger, it is covered with charpie, and treated so as to heal by granulation. As the whole of the wound of one finger is closed by skin, reunion of the fingers is impossible. The author states that, in several instances, he has successfully adopted the method now described.

CASES OF DOUBLE VISION AND STRABISMUS; CAUTERISATION WITH THE NITRATE OF SILVER.

Dr. K. A. Hille reports the following cases in *Ammon and Walther's Journal;* and we quote them from the *Journal des Connais. Médico-Chirurgicale* of the 17th April, 1851. They bear a strong resemblance to cases published by M. Deval in the latter periodical, for 10th Nov. 1850, in a paper entitled "*On Cauterisation of the Sclerotic Conjunctiva in some cases of Paralytic Strabismus.*"

Case i. A man, aged 28, was admitted on the 27th October, for the cure of double vision, and a chronic inflammation of the right eye, which Dr. Hille regarded as rheumatic. The latter affection readily yielded to diaphoretics, and slightly irritant treatment. There remained the diplopsia, and a slight squint. Aware of Dieffenbach's favourable opinion of the nitrate of silver as an heroic remedy in certain cases of passive strabismus, Dr. Hille resolved to try cauterisation with it, as a remedy for both affections. He operated on the 1st November. The patient being seated, and his upper eyelid fixed by an assistant, he was directed to look at the root of his nose; the solid nitrate of silver was then applied to the conjunctiva, at the external angle of the right eye, above the rectus externus muscle. The patient left the hospital entirely cured.

Case ii. A patient suffering from venous cardialgia (?) applied to Dr. Hille during the following year. She had likewise convergent passive strabismus of the right eye. The globe of the eye being turned upwards, and towards the internal angle, the cauterisation was made between the rectus internus and rectus inferior muscles. Some inflammatory symptoms followed the operation; but, at the end of three weeks, the patient left the hospital, as radically cured as the other, whose case was above detailed.

TREATMENT OF GONORRHŒA AND SYPHILIS IN NEW YORK.

In the Report of the Venereal Hospital attached to the New York Penitentiary, we find the following remarks:

The Croton water has recently been introduced into the hospital, and Dr. Kelly has availed himself of this extensively in the treatment of blennorrhagia, uterine diseases, and many cases of primary syphilis. In the water closets of each ward, a hose with a stop-cock and vaginal syringe termination has been attached to the water pipe, and a convenient seat, with a pipe for

the waste water, fitted up. On this seat each of the aforesaid patients place themselves daily or oftener, and introducing the hose, enjoy a most thorough irrigation and purification of the parts. The doctor sanguinely anticipates much good, both moral and physical, from this addendum to his plan of treatment.

The *Iodide of Potassium* is administered only in a few forms of constitutional syphilis, but in many of these it is given in large doses. From two to six drachms daily is not unusual. Opium, iron, and good living, are considered indispensable in the treatment of almost every form of constitutional syphilis. [*New York Register of Medicine and Pharmacy*, 1 June, 1851.]

OBSTETRICS.

CASES OF IMPERFORATE VAGINA AND OS UTERI.

Two interesting cases of imperforate vagina and uterus have recently been recorded in the *Gazette Médicale:* one by Dr. Debrou of Orleans, in the numbers for January 18 and 25; the other by M. Armand Trumet, in the number for May 31, 1851.

Abstract of Case recorded by Dr. Debrou. *Summary.* Complete Congenital Obliteration of the Vagina, with Imperforate Cervix Uteri: Formation of a Vaginal Canal and Uterine Orifice: Marriage: Pregnancy: Delivery at the Full Period: Convulsions: Application of Forceps: Child Dead; Metro-Peritonitis: Death on the Tenth Day. In the beginning of 1847, Dr. Debrou was consulted by L., a girl nineteen years old, who had, since she was seventeen, suffered monthly from menstrual pains, without any catamenial flow. For three months before she consulted Dr. Debrou, the pains had become very severe, and lasted for several days each time; and, in the intervals, instead of regaining her health, she had lost sleep and appetite, and become very thin. Her abdomen had also become enlarged. On examination, an oval tumour, of the size of a hen's egg, painful on touch, and slightly moveable, was discovered on the right side. In the hypogastrium there was a more extensive tumour, reaching from the pubes to two finger-breadths below the umbilicus: it was regularly rounded, slightly painful, and firm, but somewhat elastic. Between the nymphæ, clitoris, and frænum, there was a slight depression, without an aperture, in the situation of the orifice of the vagina. On examination, with the finger introduced into the rectum, and a female catheter in the bladder, these organs were found to be separated by an interval of three or four lines, formed of a firm material.

Dr. Debrou hence concluded: 1. That the hypogastric tumour consisted of the uterus distended with menstrual fluid. 2. That the small moveable tumour at the side of the other, in the right flank, was the ovary or Fallopian tube similarly distended, and perhaps ready to burst into the peritoneal cavity. 3. That the vagina was almost or entirely absent, being replaced by a fibrous tissue. 4. That, in order to rescue the patient from inevitable death, the fibrous tissue between the vulva and cervix uteri must be divided by an operation.

On February 22, 1847, the operation was performed by Dr. Debrou and M. Vallet of Orleans. The patient was placed on the edge of a bed, with her thighs separated, as in the operation of lithotrity. The bladder was first emptied. The right index finger having been placed in the rectum, Dr. Debrou penetrated with a bistoury the centre of the space between the frænum and urethra. He gradually divided the resistant fibrous tissue to the depth of about an inch, and then tried to complete the operation by tearing with his finger nail or the handle of the bistoury. He was obliged, however, to divide the tissue with the point of the instrument for an inch deeper, and he then felt with his finger a solid round body at the bottom of

the wound. With his nail and a large director he exposed this projection, which was situated two and a half inches from the vulva. Little blood escaped. On exploration *per rectum*, the projection felt was discovered to be a portion of the uterus—probably the neck. As the os uteri could not be in any way discovered, Dr. Debrou made an incision with a bistoury, and afterwards introduced a female catheter: a little blood escaped. The opening was still further enlarged by a bistoury guided on a director, and gave exit to a large quantity of semi-coagulated blood, like thick chocolate. A portion of it presented a redder colour the next day, and coagulated; yielding, however, very little serum. On introducing the index finger into the uterus, this organ was found to form a large cavity, with very smooth walls. By placing one finger in the uterus and another in the rectum, the walls of the former were found to be very thin. Dr. Debrou thinks that this shows that *the uterus, when mechanically distended by an accumulation of the menstrual fluid, does not become thickened*, as it does when filled with the products of conception.

The subsequent treatment consisted in keeping the orifice dilated by means of a sound and charpie, and sometimes by a sponge placed in the vagina. On May 4, 5, and 6, the menses flowed in abundance. They were absent, however, in June and the following months; and in March 1848, the uterus was again distended. Dr. Debrou, having in the meantime succeeded in dilating the vagina by charpie, sponge-tents, etc., made another orifice in the uterus, which he carefully kept dilated. The catamenia were absent in April, but they appeared in May and each subsequent month, with the usual symptoms: and the patient became quite well.

In February 1849, the patient married. Dr. Debrou examined her on the 24th of that month. She presented *embonpoint*, and her breasts were well developed. There had been no irregularity in menstruation; and her health was excellent. A small quantity of mucous fluid exuded from the vulva. The vagina was nearly three inches in length, and easily admitted two fingers; its walls were soft, supple, and lined by a covering analogous to a mucous membrane. At the extremity, the uterus could be felt, and a round aperture, with hard borders, which easily received the end of a female catheter. The cervix uteri could not be recognised. The bottom of the vagina, which was somewhat narrower than the rest, was attached round the orifice of the uterus. The abdomen was firm, and gave a clear sound on percussion, as far as the pubes: there were no signs of either of the tumours above described. The pelvis was well formed.

She had been married on February 12, and became pregnant very soon after. Dr. Debrou saw her at the end of April, when she had been pregnant above three months: the catamenia had not appeared since her pregnancy.

Nothing very remarkable occurred during gestation: she had an attack of diarrhœa in August, which lasted for three months, and much weakened her. Delivery took place on November 2, two hundred and sixty-two days after marriage. The pains commenced at five in the morning, and Dr. Debrou visited her at noon. The uterus then presented an aperture of the extent of a centimètre, through which a little liquor amnii had escaped. The head could be felt; it had descended into the pelvis. The pains came on regularly every three or four minutes, and all seemed going on favourably.

At one p.m., the opening was of the size of a franc piece, so that Dr. Debrou could introduce his finger. The tissue round the orifice was firm and tense, although thin; and Dr. Debrou divided it at the sides by means of a probe-pointed bistoury guided on his finger. Dilatation did not become much more rapid; and at two o'clock, the orifice was as large as a two-franc piece. The pains were still frequent, and strong. Dr. Debrou made more incisions, but not quite so extensive as before: he could now pass his finger between the head of the fœtus and the walls of the uterus. At five p.m., the orifice was dilated to the extent of a six-livre piece, and the scalp of the

child projected into the vagina. The pains were more continuous, but less effectual; and the patient began to lose courage. She had frequently taken broth since Dr. Debrou's arrival.

At a quarter to six, the patient complained of severe pain in the head, and immediately had an attack of convulsions. Dr. Debrou took about two ounces of blood from the arm. The patient came to herself in about three minutes, and complained of pain in the epigastrium and head. A sinapism was applied to the region of the stomach. In about a quarter of an hour, another attack of convulsions occurred. Dr. Debrou, as soon as it was over, applied the forceps without difficulty, and extracted a still-born female child, which could not be reanimated. It had probably died during the attack of convulsions in the mother.

November 3. The patient had slept well. The uterus reached as high as the umbilicus, and was slightly tender on pressure. The perinæum had been torn for about an inch; but rather more than an inch remained sound in front of the anus. The recto-vaginal septum was uninjured. A poultice was applied to the abdomen.

November 4. The hypogastrium was tender; and the lochial discharge was diminished. The pulse was 120. Twenty leeches were applied to the hypogastrium. After this, the patient got better for some days.

November 7. At six p.m. she was attacked with colicky pains, without evident cause. They continued through the night: but Dr. Debrou was not sent for.

November 8. Dr. Debrou visited her at noon, and found her flushed; pulse 135, full and tense. The lochia were suppressed. The abdomen was tense, inflated, and painful everywhere. The uterus reached above the umbilicus—having been two finger-breadths below it on the proceeding morning. The urine had to be drawn off by the catheter. There had been no rigors. Twenty-four leeches were applied to the abdomen. The subsequent treatment consisted chiefly in the application of mercurial ointment and cataplasms to the abdomen. The patient continued much in the same state: and died on November 11, at one o'clock in the morning. An autopsy was not permitted.

Two questions are suggested by a consideration of this case:

I. Is it proper to operate on girls arrived at puberty, who have complete obliteration of the vagina, with imperforate uterus?

II. If the operation succeeds, can marriage be permitted, with the hope of a successful delivery? The last of these questions is first treated of, as being most interesting.

I. THE OPERATION FOR IMPERFORATE VAGINA AND UTERUS HAVING BEEN SUCCESSFUL, CAN MARRIAGE BE PERMITTED, WITH THE HOPE OF A FAVOURABLE DELIVERY? M. Amusat recorded, in the *Gazette Médicale* for 1835, pp. 785 and 817, a case in which he had operated for congenital absence of the vagina. He pronounced in favour of marriage; but there were no facts by which to prove the correctness of his opinion. Dr. Kluyskens also related a case in the *Annales et Bulletin de la Société de Médecine de Gand*, July 1845. The patient married; but did not become pregnant. Dr. Debrou hence considers that his case is the only one which throws light on the above question.

The ready manner in which conception took place, and the regularity of the pregnancy, appear remarkable: I. Because the long retention of the menstrual fluid, and the operations required to liberate it, might be supposed to unfit the uterus for the development of a fœtus; and II. Because the tumour formed by the ovary or Fallopian tube on the right side might be imagined to interfere with fecundation.

In the accouchement, there were three circumstances worthy of note: the

difficult dilatation of the uterine orifice, the convulsions, and the application of the forceps.

In ordinary circumstances, it may be easy enough to make incisions in the os uteri: but this becomes very difficult when the vagina is not of its natural size, and especially when the uterus does not project into the vagina. Hence the incisions made by Dr. Debrou did not produce the full effect which he desired; and from this cause, and the resistance of the orifice, resulted the tardiness of labour, and the long duration of the pains, which, having but little effect, were, he thinks, the principal cause of the convulsions. The forceps he would not have applied unless under pressing necessity: and the escape of the perinæum and recto-vaginal septum from any injury of importance were fortunate results, which he scarcely expected.

The metro-peritonitis could not be attributed to the length of the labour, which lasted thirteen hours. Could the combination of the incisions, the convulsions, and the application of the forceps, have produced the fatal affection? Dr. Debrou does not attempt to give a decided answer to this question; but believes it his duty merely to relate the facts, and leaves others to form their own opinions.

The following are the conclusions at which he arrives.

It was proper to advise the patient to marry. If she had been stronger, and not weakened by diarrhœa lasting for three months, she might have been delivered without the aid of the forceps. The convulsions were doubtless attributable to the resistance of the uterine orifice, and were the cause of the death of the infant: but they form no argument against marriage. The metro-peritonitis was not necessarily connected with the manner in which delivery took place, nor with the peculiar condition of the genital organs: but it was produced in the same way as in other women. If the patient had recovered, she might have again become pregnant, and have had a favourable delivery. With regard to the induction of abortion at the seventh or eighth month, this would not, in Dr. Debrou's opinion, be necessary. He believes that, *if another woman should become pregnant, after the formation of a vagina and uterine orifice by operation, she might be delivered without sacrificing her life, or that of the child.*

II. Is it proper to operate on females arrived at puberty, who have complete obliteration of the vagina, with imperforate uterus? Dr. Debrou objects to the term, *absence of the vagina*, which is frequently applied to cases of imperforation, as not sufficiently precise. He would use the term *imperforation* to express generally the absence of an external aperture, employing the term *occlusion* to denote that variety where there is merely imperforate hymen; *obliteration*, perfect or imperfect, where the situation of the vagina is more or less occupied by fibrous tissue; and *absence*, when there is no interval between the rectum behind, and the bladder and urethra in front. Of the latter variety, he believes there is only one case—that of M. Amussat, already mentioned—which has been operated on. These distinctions are useful, as the danger and difficulty of operation increase from the first towards the last; yet operations in each form have been successful.

The motive which should lead the surgeon to operate, is the danger of the inevitably fatal result to the patient, if she is not relieved from the accumulation of the menstrual fluid. We must not, however, follow the example of Stoltz, who formed an artificial vagina in a female who had no uterus: the operation has sometimes proved fatal, even in able hands, and can only be justified by necessity.

An important sign *is the presence of an ovoid tumour, slightly capable of rotation, distinct from the uterus, and situate at its side in one of the flanks.* In Dr. Debrou's case, he feared that it might burst into the peritoneum. M. Amussat also noticed this tumour in his case; and says that it opened

into the rectum, and gave exit to large quantities of blood, similar to that which escaped from the uterus. The bursting of this ovarian or tubal sac produced severe symptoms : and this should form an additional reason for speedily operating when it is perceived.

The operation for forming an artificial opening in the uterus, has been objected to by Sabatier-Dupuytren,[1] Bégin,[2] and Pigné,[3] on the ground of its being likely to produce metritis. Yet the operation is not necessarily attended with danger ; and Barré,[4] Hervez de Chégoin,[5] Wattmann,[6] and Delpech,[7] as well as Dr. Debrou, have performed it without any such bad effects. Dr. Debrou believes, that if the opinion attributed to Dupuytren be fairly examined, he will be found to refer to those cases, where it has been necessary to operate also on an obliterated vagina. It is this, almost entirely, which constitutes the severity of the operation.

Dr. Debrou next offers some remarks on the fact, that he was obliged to make an opening into the uterus a second time.

Excluding those cases in which the os uteri has become closed in pregnant females after conception, and in which it has been necessary to make an artificial opening to render delivery possible, he finds nine cases recorded which throw light on this subject. These he divides into two categories. In the first, including four cases, those of Barré, Hervez de Chégoin, Wattmann, and Delpech, the vagina was of ordinary conformation. In the second, the vagina was more or less obliterated, or even entirely absent. This category includes five cases : one by William de Metz ;[8] one by Desgranges ;[9] Amussat's case ; one by Dr. de Bal ; and one by Dr. Kluyskens ;[10] Dr. Debrou's case makes a sixth.

Two questions have to be considered : How long should a foreign body be left in the wound ? What means have been used for opening the uterus ?

All who have operated, except Delpech and Desgranges, have used a foreign body to prevent cicatrisation of the orifice. M. Hervez de Chégoin first introduced a gum elastic sound, and on the third day, a female catheter, which he kept in nearly two months. Dr. Barré introduced a large gum elastic sound, which he kept in only fifteen days, even taking it out several times on account of the pain which it produced. M. Delpech left the case to nature ; the orifice is said to have remained open, and the menses to have flowed for two periods, after which he lost sight of the patient. Wattmann introduced a leaden canula : it is not stated how long it was retained, but his patient seems to have been cured. William de Metz introduced a plug of charpie ; and says that " in a month, the patient was cured" ; hence probably it was not kept in beyond that time. M. Amussat employed sounds for forty-four days, gradually increasing their size ; and several times was obliged to suspend their use, on account of the pain occasioned, and because the patient was attacked with peritonitis. Desgranges merely introduced charpie between the *labia majora* and the vagina : but it appears probable that his case was not one of congenital imperforation, but of incomplete obliteration of the vagina and occlusion of the os uteri, resulting from

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[1] Sabatier-Dupuytren, tom. iv, p. 555.

[2] Bégin, M. Nouveaux élémens de Chirurgie. 2nd Ed., tom. i, p. 445.

[3] Chélius, M. Traité de Chirurgie, traduit et annoté, par Pigné, tom. ii, p. 62.

[4] Case related by M. Dance in *Archives Générales de Médecine*, tom. xx, 1me serie, p. 530.

[5] Hervez de Chégoin, M.; communicated to the Academie de Médecine, 23rd November, 1829.

[6] Wattmann, M. Gazette Médicale, 1841, p. 632; from a German Journal.

[7] Delpech, M. Mémor. des Hôpitaux du Midi, tome ii, p. 147.

[8] Related by M. Amussat, *Gazette Médicale*, 1835, pp. 785, and 817.

[9] Desgranges, M. Mémorial des Hôpitaux du Midi, tome ii, p. 479.

[10] De Bal, Dr., and Kluyskens, Dr. Annales et Bulletin de la Société de Médecine de Gand, July 1845.

syphilitic vegetations and from adhesions following chancres. Dr. de Bal used a gum-elastic sound ; but for how long, he does not say ; he merely mentions that the vagina was very small and undilatable. Dr. Kluyskens introduced from time to time a gum elastic canula ; the cure was complete at the end of five weeks. Dr. Debrou at first used charpie, then a No. 8 gum elastic sound for thirty-four days, occasionally suspending its use towards the termination.

The instrument employed to make an opening in the uterus has been generally a trocar, a pharyngotome, or some analogous instrument. Three surgeons only—M. Amussat, Dr. Kluyskens, and Dr. Debrou—used a bistoury ; but they also enlarged the aperture, so that, in Dr. Debrou's case, he could introduce the finger into the uterus.

It hence appears, that neither the method of making the opening, nor of maintaining it, had much effect on the result ; which was persistance of the orifice, in every case except that of M. Debrou. His failure, he says, must be explained in some other way. We must take into consideration the coexistence of occlusion of the uterus, and complete obliteration of the vagina ; the difficulty of keeping open the orifice at the bottom of the newly formed canal, which itself has a tendency to close, especially at its upper part ; and the great importance of restoring the vagina to its natural dimensions—even greater than keeping open the uterine orifice. Most of those who have operated, have been content with making the vagina merely large enough to allow the escape of the menstrual fluid.

Sometimes the vagina is not obliterated at the upper part, and this will diminish the difficulty ; for it is the upper part of the vagina which especially tends to contract, and to narrow the new uterine orifice.

Dr. Debrou believes that he arrived at a more complete result than the other operators, and sums up his remarks as follows : " In the first place, the efforts of the surgeon should be directed rather to the restoration of the vagina than to the establishment of the uterine orifice ; because the first object is the more difficult, and much more important. Even though my case has only the merit of shewing the difficulties in the way of forming a vagina of sufficient dimensions, I believe that it will still be useful. In my opinion, this point is more important than the other, because, when life is assured by evacuating the uterus, if the orifice made cannot be easily maintained, on account of the contraction of the vaginal canal, it may be left alone until the vagina is restored. When this is once effected, a new incision in the uterus will not be attended by danger, and may easily be rendered permanent."

II. Case related by M. Trumet. *Summary.* Malformation of the Uterus and its Neck : Retention of Menses : Operation : Quinsy : Peritonitis : Death : Necropsy. A countrywoman, aged 23, was admitted on April 27, 1850, into the Hôtel-Dieu, under M. Jobert de Lamballe. She had been married ten months. Menstrual pains commenced at the age of fifteen, and occurred regularly every month ; but no discharge took place. When she was twenty-one, an operation was attempted ; but the only account she could give was, that the surgeon made incisions with a sharp instrument, and then placed pieces of charpie in the vagina. This was repeated three times, but still the menstrual fluid did not appear. The same surgeon subsequently advised marriage, assuring her that it would cure her. She therefore married in July 1849, and menstruated, for the first time, four months afterwards, and again two months before her admission into hospital. M. Landouzy operated on her in September 1849, " by raising a flap of the tissue in some part of the genital canal, and leaving there an instrument for three weeks ; after which he withdrew the instrument, and did nothing more."

On admission, she was of a good figure, slightly coloured, without any

expression of suffering. Her health was good, except during the menstrual periods. She then had severe pains in the whole abdomen, radiating to the groins, loins, and thighs, constipation, loss of appetite, general *malaise*, fever, and even vomiting. In the intervals, the abdomen was supple and painless almost in its entire extent, but was tender on pressure in the hypogastric region. There was in this situation a swelling in the pelvis, rising slightly above the brim, and probably formed of the body of the uterus. There was no pain on pressure in the iliac fossæ, and nothing could be felt there. The external aspect of the vulva was normal. The vagina was narrow and shallow, and terminated in a cul-de-sac, presenting some cicatrices, probably the results of the former operations. The cervix uteri did not project into the vagina ; in its place there was a hard firm tissue, not painful on pressure. On examining *per rectum*, the tumour lying behind the pubes could be felt in front of the intestine. There was nothing remarkable in the urinary or other functions ; except that the stools were difficult during the monthly uterine congestions. Since the last menstruation, she had had pain, first in the right thigh, and then in the left lower limb.

May 10. M. Jobert operated on her. She was placed on a table in the position for lithotomy ; and chloroform was administered. The vagina was held open, and the recto-vaginal septum was held down by an univalve speculum. M. Jobert then introduced a large trocar into the part corresponding to the neck of the uterus. Nothing appeared at first ; but in a little time there escaped from the canula one or two spoonfuls of thick, dark, pitchy blood, just like that which is found in the vessels of cholera patients, or rather like treacle. When this had ceased flowing, M. Jobert enlarged the opening with a bistoury and scissors. He then fastened the edges of the opening which he had made to the vaginal mucous membrane, by interrupted sutures, and then introduced a large gum-elastic sound. For some days, some of the same kind of blood continued to escape. The patient appeared to do well till May 17, when she had a rigor ; symptoms of peritonitis appeared the next day, and quinsy on the 26th ; and she died on the 31st.

Necropsy. False membranes were found in the peritoneum and on the pharynx. The uterine appendages were involved in the inflammatory exudations, and could not be recognised. The uterus was larger than in the normal state. It, with the vagina, was divided in the median line, and presented :

1. A highly developed fibrous texture.

2. A small round circumscribed cavity, of the size of a Provence nut, hollowed in the body of the uterus, in its tissue ; this cavity contained several clots of blood, and had no communication with another cavity, which will be presently described in the interior of the neck.

3. The neck of the uterus was of normal length and appearance, but was imperforate above, and had no communication with the uterine cavity : it was entirely surrounded by the vagina. The neck contained a cavity, elongated from above downwards, and having no communication whatever either with the cavity in the uterus, or, before the operation was performed, with the vagina. This alone can have been reached by the trocar. The peritoneum had not been wounded by the instrument.

CASE OF CATHETERISM OF THE FALLOPIAN TUBES; CONSEQUENT REMOVAL OF AN OVARIAN TUMOUR, PER VIAS NATURALES.

Dr. S. A. Cartwright reports a very strange case, which we give in an abridged form from a New Orleans Journal, as quoted in the *Boston Medical and Surgical Journal* for May 21, 1851, p. 318. We are surprised to observe that he does not allude to what Dr. Tyler Smith has written on catheterism of the Fallopian tubes. [*Vide* London Journal of Medicine, vol. for 1849, pp. 590, 676, 1068.] To apply a strong solution of nitrate of silver to the

inside of the Fallopian tubes, is certainly a step in advance of Dr. Tyler Smith!

Case. On the 10th March, 1850, Dr. Cartwright sent for Dr. Warren Stone to consult with him as to the removal of "a large and hard ovarian tumour from" a small, delicately-formed lady, aged 19, of sanguine temperament, and scrofulous constitution. When Dr. C. told the patient that it would require an incision two feet long for the extirpation of so large a tumour, she replied, that "she did not care if it were three feet, as she had rather die than live to suffer as she did". The lady had been married two years. She was pale; and looked as large as a woman in the ninth month of pregnancy. The tumour had been growing from her earliest recollection; but it had not been so large as to incommode her much till after her marriage. Treatment by iodine, etc., had been of no avail.

On the 18th of March, an examination by the speculum was made. The mucous surfaces were pale: there were neither leucorrhœal discharge, nor inflammation, nor congestion. A very small gum-elastic catheter, with a wire in it, after repeated efforts, was introduced into the uterine cavity. The passage of the catheter through the coarctation, called the os internum, gave some pain, and caused a faintish sick sensation. The small catheter was withdrawn, and a larger sized instrument was passed, with some difficulty, through the cavity of the cervix into the uterus. It penetrated about two inches: on being withdrawn, a little blood as usual followed. Dr. Cartwright now resolved to try catheterism of the left Fallopian tube. The catheter containing a wire was flexed like the male catheter, and passed through the fusiform cavity of the neck, into the triangular cavity of the uterus itself: the wire was withdrawn about half an inch, so as to make the point of the instrument more flexible, and was carried forward in the direction of the *ostium uterinum* of the left Fallopian tube. It entered the tube after a few trials, and after penetrating about an inch, it seemed to enter a cavity or expansion of the tube itself: it was pushed forward about an inch and a half more, seeming in its passage to encounter a soft yielding substance: it was then withdrawn, when a gelatinous substance followed, which was recognised to be a hydatid formation. The same catheter, with a very tapering point, was dipped into a solution of nitrate of silver (a drachm to the ounce of water). Several minims of the solution were drawn into it, by working the wire in the calibre of the instrument; it was then passed through the uterine cavity into the Fallopian tube, until it had penetrated the tube three inches, when it was moved about in the cavity of the tube, and the wire moved so as to eject the caustic solution through the eyes of the catheter, among the hydatid cysts that the instrument had reached. On withdrawing it, a semi-membranous, tenacious substance, with dark specks interspersed through it, not unlike frog-spawn, presented itself at the mouth of the uterus, seeking an exit, but too thick and glutinous to pass freely. Finding it too soft and yielding to be drawn away with the forceps, a little raw cotton was passed around a probe, so as to entangle the viscid substance, and by turning the probe, the stringy matter was wound around it, and pulled out of the uterus in long mucilaginous ropes. The supply seemed to be inexhaustible. The patient being much fatigued, the operation of drawing away the hydatids was at length suspended; nevertheless they continued to come away, *per vias naturales*, for a week or more. In the meantime, the tumour was reduced to less than half its former size, and grew softer and less painful. The "catheterism of the Fallopian tube" (?), *with the catheter filled with a strong solution of nitrate of silver*, was repeated on the 3rd of April, the 1st, 7th, and 13th of May. At the last operation, no more hydatids or viscid fluid were brought away; but at all the other operations, they were; and they continued to pass off for a week, or more, after each catheterism.

The day after the last operation, the patient left town for the sea-shore;

her health had begun to improve rapidly, her pains were gone, and her abdomen was reduced to near its natural size. While absent, her health appeared to be entirely reinstated.

Last autumn she returned to the city, quite well, though some fulness and hardness could still be felt in the hypogastric region, the effects of the former adhesions. Her general health improved during the winter, and she was enabled to dance, waltz, and walk about town as actively as almost any other woman. Although she suffers somewhat from painful distension in the abdominal and pelvic regions during her menstrual periods, and is dyspeptic and flatulent at such times, yet, when that is over, her form is quite sylph-like. The leucophlegmasia is giving way to the rosy hue proper to her original sanguine temperament.

Dr. Cartwright concludes his paper with the subjoined paragraph ; we hope that he may yet tell us how he knows that he *did not* MAKE *a passage with his catheter*, in place of pushing that instrument up the cavity of the Fallopian tube ?

" As this is the first case of ovarian tumour, as far as I know, which has been treated by catheterism of the Fallopian tubes, I have thought proper to report it. I do not consider the operation as always a difficult one, because, when the ovaries are in a morbid state, the Fallopian tubes are, in general, much more easily catheterised than in the healthy condition. I doubt its practicability in a state of health ; possibly it might be effected during the catamenial period. The same important practical law obtains in regard to the uterus itself, it being generally easier to probe when in a morbid state. I have succeeded in curing some cases of dysmenorrhœa and sterility by catheterism of the Fallopian tubes, selecting the proper time for the operation ; but, as its virtues in this respect are already known to the profession, it is unnecessary to dwell upon the subject, farther than to say, that New Orleans can show some as unquestionable evidences of its efficacy in sterility as London."

DR. JOHN APPLETON ON PUERPERAL ANÆMIA.

We abridge the following from the *Boston Medical and Surgical Journal* for February 19, 1851.

CASE. Mrs. E., aged 26, had for two years previous to the period at which DR. APPLETON was first consulted, suffered with " dyspepsia". She first came under his care in January 1849, being then in the seventh month of her first pregnancy. She complained of dyspeptic symptoms, with obstinate constipation. The tongue was coated ; the pulse slightly accelerated. The more urgent symptoms yielded to the use of aperients, with the subnitrate of bismuth and extract of henbane.

She was next seen by him on the day of her accouchement, which took place on the 8th of March. About a fortnight before, she had taken a severe cold, producing catarrhal cough, attended with considerable fever ; not sufficient, however, to induce her to call any medical aid. The labour was natural, and easily terminated. The hæmorrhage, although free, was not remarkably copious ; and the first few days after delivery were unattended with any unpleasant symptoms, except the cough and daily exacerbations of fever.

After the first week, her strength declined, and any attempt to assume the erect posture produced faintness. Her pulse varied from 104 to 120. The mucous expectoration was not profuse. Dyspnœa was occasionally urgent, although the patient was generally able to lie down. Headache, with intolerance of light and sound, frequent sighing, and extreme despondency, alternately with a high degree of excitement, now appeared. Epistaxis had occurred once or twice in the early period of her confinement.

She was visited by Dr. Longley, of Haverhill, in consultation, on the

eighth day after delivery; the bronchial inflammation and febrile excitement were the most prominent marks of disease. Percussion and auscultation gave no signs of organic disease, or of effusion into the thoracic cavities.

During the succeeding week, the heat of the surface subsided; the tongue, which had been coated, became clean; the appetite improved; there was an abatement of the cough, and a slight increase of muscular strength. The improvement, however, was but temporary. The prostration again became extreme; the pulse continued frequent, while it diminished in strength; the stomach became more irritable, rejecting both medicine and nutriment. The pallor of the face, which had for a few days been less remarkable, assumed more of the waxy, bloodless appearance, peculiar to the disease; the lips, tongue, and mucous membrane of the mouth, became pale; and she finally sank, on the 31st of March, twenty-three days after delivery.

Examination of the Body, Sixty Hours after Death. There was much fat in the subcutaneous cellular tissue, and also about the heart and abdominal viscera. The external muscles were somewhat coloured, but scarcely any blood followed the scalpel. The cartilages of the ribs were much ossified. There were some small petechial spots on the surface.

Thorax. The lungs crepitated perfectly in every part; their colour externally was a very light gray. There were no adhesions to the costal pleura. The cavity of right thorax contained 1½ pint of straw-coloured serum; the left nearly 1 pint. There was a solitary tuberculous deposit in the right lung. The pericardium contained more than ʒxiv of serum. The heart was large, flabby, and loaded with fat: its muscular texture was extremely pale, soft, easily torn, and resembling sodden meat. A small quantity of pale, watery blood, was found in the right cavities.

Abdomen. There was a considerable quantity of yellowish serum in the peritoneal cavity. The stomach was distended, containing ʒviij of brownish fluid; it tore by the weight of its contents, when raised. The intestines were loaded with fat; but they were not otherwise unhealthy, except exhibiting, together with the stomach, a pale, bloodless aspect. The liver was nearly one half larger than the normal size, of a pale lead colour; the texture was somewhat friable. The spleen was of natural colour, soft. The kidneys were pale and bloodless. The uterus was somewhat larger than usual at this period after delivery, pale, flaccid, and contained a small quantity of nasty slate-coloured substance, which, when removed, exhibited a dull white internal coat, on which the orifices of the uterine vessels could be discerned.

Head. Not examined.

There had been but a scanty secretion of milk at any time after confinement. Abscesses had, however, formed in both mammary glands, containing much pus.

Remarks. The actual morbid change in the characters of the blood in this disease, appears to be a diminution in the proportion of red corpuscles, without any alteration of the absolute quantity of fluid in the vessels, although the serum exists in undue proportion, and the specific gravity of the blood is diminished. The analyses of this fluid in chlorosis, by Lecanu, have shown it to contain, in 1000 parts, nearly 862 water, 83 albumen, and 55 red corpuscles; 115 being the average proportion of the last in the normal condition.

It is chiefly in connexion with the puerperal state that anæmia is most malignant, and seems in most cases to bid defiance to all remedies.

What is the peculiar influence of the uterine system upon the condition of the blood, which predisposes the circulating fluid to assume the peculiar character of chlorosis or anæmia? The term "hypæmia" has been suggested by Andral, as more correctly indicating the actual pathological condition in these diseases.[1]

[1] Should the present name be retained, "anhæmia", as proposed by Good, and by Professor Channing, in his valuable notes on this disease, may be the more correct orthography.

Dr. Appleton has reduced to a tabular form the symptoms in twenty-one cases of this disease, which have been described by different authors, including that of which the history has been given above. The results derived from this table show the greater or less frequency of the more prominent characteristics of the disorder.

In the records of these twenty-one cases, extreme pallor or bloodlessness of the surface was noticed in all. Emaciation, which both Good and Copland have mentioned, was only observed in three cases. Petechial spots were seen in two. The loss of muscular strength was noticed as remarkable in ten cases of the twenty-one. In three, syncope was induced by assuming the erect posture. Headache was prominent in five cases, and intolerance of light and sound was excessive in five. Eight patients complained of noise in the ears. Delirium is only noticed in two cases, and confusion of mind in one; while the mental faculties are described as remarkably clear in others. Restlessness was present in three cases. Dyspnœa was urgent in seven, and probably existed to a greater or less extent in others. Cough was noticed in three cases. Five patients suffered from palpitation, while the action of the heart was greatly accelerated in eleven. The digestive organs were affected as follows: Two patients had sore mouth. The appetite was diminished in five, and voracious in one. Nausea and vomiting were present in four cases. Diarrhœa supervened in seven, while the bowels were constipated in two. Four complained of excessive thirst. Chills were noticed in three cases. Among the puerperal patients, the secretion of milk was scanty in two, and milk-abscess was formed in three. Many of the descriptions are more or less imperfect, and some of the more prominent symptoms probably existed in other cases than those in which their appearance is recorded.

Pathology. The most important and constant lesion revealed by autopsic investigation of this singular malady, consists in the change in the character of the blood.

On collating the morbid appearances shown by *post-mortem* examinations, in six cases among the twenty-one to which reference has been made, the vessels are described as nearly empty of blood in three cases, while in all the six the fluid was of a pale red, watery, coagulating firmly in one case; while, in three others, the fibrinous deposits were whitish and soft. In one case, the blood was mixed with a thick, whitish, opaque fluid. No appearance peculiarly characteristic of the disease has generally been found in the cranial cavity. Increased firmness and density of the brain was noticed in a single case. There was considerable effusion in the cavities of the thorax, in five subjects; amounting to 1½ pint in each cavity in one instance. The lungs were permeable to air in every part in all the cases, but slightly œdematous in two. Emphysema was present in one case. The quantity of serum in the pericardium was unnaturally increased in two cases, in one to more than a pint. The heart was pale and flabby in four, and in one the muscular substance was soft and easily torn, while in another it was moderately firm. The peritoneum contained a considerable quantity of serum in two cases, and was healthy in three. The intestinal canal was healthy in three cases: its coats were pale in two, slightly injected in another. The liver was pale in three cases, greatly enlarged in one, extremely friable in one, and healthy in one. The spleen was large in two cases, and healthy in another; it was soft in one case. In all the cases, the kidneys were pale, and in one flaccid. In every case in which the disease supervened on the puerperal state, four in number, the uterus was found to be pale; the muscular tissue was soft and easily torn in one case; and in two the tongue was flaccid.

In the present state of our knowledge, we cannot trace all the circumstances under which this disease is developed, or account satisfactorily for the phenomena presented during its progress.

Treatment. The most satisfactory results have followed the use of iron in some of its preparations. Of these the sulphate seems to have been most

generally used. The phosphate was principally relied on in the case above reported. Sir H. Marsh, in a communication to the *Dublin Journal of Medical Sciences*, considers iron to be most efficient, when combined with some one of the preparations of cinchona and other vegetable tonics. In those cases in which iron cannot be borne by the stomach, other metallic tonics, as the salts of bismuth, have been recommended in its stead. Pure and dry air, light, and a nutritious diet, are important adjuncts in the general plan of treatment.

THE OBSTETRICIAN'S TOILET: HINTS BY PROFESSOR SIMPSON.

In a recent discussion upon Puerperal Fever, before the Medico-Chirurgical Society of Edinburgh, Dr. Simpson urged "the great importance of carefully ridding the fingers from all matters in the least degree likely to prove hurtful, if inoculated into the vagina of a puerperal patient". Chloride of lime, he said, "has been recommended by various practitioners as a good wash for ridding the fingers of morbific matter". Dr. Simpson "has used for the same purpose for years, daily (or rather, generally, often during the day), a solution of cyanide of potassium, which is more effective even than chloride of lime; and it had this other advantage, that it removes, readily and at once, all such stains as the fingers of the accoucheur are apt to receive in treating uterine diseases—with nitrate of silver, iodine, and the like."

Dr. Simpson objects to the use of *gloves*. "He had been informed of an instance by Professor Patterson, in which a medical gentleman, after having lost several cases of puerperal fever, got rid of the disease in his practice by changing his clothes, and using chloride of lime, etc.; but it again returned to him, when he happened to deliver a patient, immediately after wearing a pair of gloves which he had used during the time of the puerperal epidemic: and certainly, if there was any piece of dress more apt to retain the contagion than another, it was this *useless and superfluous appendage* to our attire." [*Edinburgh Monthly Journal*, July 1851, p. 75-77.]

SUCCESSFUL CASE OF TRANSFUSION OF BLOOD.

In the London Journal of Medicine for June, p. 570, we gave an account of a case in which transfusion of blood had been practised by M. Nélaton, and in which the patient ultimately died. The operation, so far as its immediate effects were concerned, was successful; and we scarcely believe it to have had any influence in the production of the fatal attack of metro-peritonitis. We will now quote from the *Gazette Médicale* for July 5, a case, in which transfusion was performed by Dr. Marmonier under circumstances similar to those occurring to M. Nélaton, and in which the patient completely recovered. It is extracted from the *Revue Médicale* for 1851.

Case. On January 3, 1851, Dr. Marmonier was called to the woman M., aged 30 years, of a lymphatic constitution, slightly weakened by several frequent pregnancies, by tedious labours, and by moral and physical troubles. On his arrival, the pains had almost ceased. The patient was feeble, and exhausted by long and fruitless attempts to expel the child, which was prevented by anteversion of the uterus. Turning was performed. Unusual hæmorrhage followed; the placenta was rapidly extracted, and the uterus excited to contraction. The hæmorrhage was soon arrested.

In an hour and a quarter, hæmorrhage occurred in abundance, and was terminated by syncope. It soon recurred; and this time left the patient in a long fainting fit, and in a state of great weakness. Dr. Marmonier was called back to her; he found her extremities cold, the pulse almost imperceptible and sometimes absent; the sight was obscured, and there was frequent fainting. He employed astringent and refrigerant applications, the

concentrated infusion of ergot, dry frictions on the surface, and hot cloths to the limbs, for three quarters of an hour, without the least amendment. The death of the patient seemed inevitable, when he determined, although unprovided with the necessary apparatus, to perform transfusion of blood.

The apparatus which he was able to obtain consisted of a child's syringe, capable of holding 70 grammes (between two and three ounces), some hot water, basins, and linen. A young female, a neighbour of the patient, consented to supply the blood.

Dr. Marmonier laid bare the right basilic vein for about an inch and a quarter; he then isolated it for about four-fifths of an inch, so as to pass a thread under it, which might tie it down to the canula of the syringe. He then made an incision in the vein for one-fifth of an inch; only two or three drops of blood escaped. The vessel was compressed above and below. He then caused the blood to flow from the young woman into a cup placed in a vessel of hot water. Having first warmed the syringe, he filled it with blood, taking care to introduce no air, and introduced it into the opening in the vein. After carefully pushing down the piston about a third of its length, the flow was found to be retarded; this inconvenience was obviated by wrapping the syringe in cloths dipped in hot water, when it was again introduced. All the blood contained in the syringe now entered the vein. The total quantity introduced was about 90 grammes (about 4 ounces). The operation was unattended by pain or any other inconvenience.

Almost immediately after the transfusion, the respiration became more regular, and the pulse stronger. The disposition to syncope ceased suddenly. The obscurity of vision was rapidly dissipated. Dr. Marmonier ordered the frictions and hot cloths to be continued; and administered rhatany and ergot. The circulation and the animal heat were gradually reestablished. Two hours after the operation, the patient slept for some minutes; and this was followed by an unhoped-for amelioration. From this time, convalescence was rapid; the milk was secreted regularly. In ten days, the patient could sit up for an hour each day; on the twentieth day, she was quite well; and on the thirtieth day, she had resumed her ordinary occupations.

MATERIA MEDICA AND PHARMACY.

CHLOROFORM AS A SOLVENT OF CANTHARIDIN.

Mr. William Proctor, after noticing the discoveries of Rabourdin regarding the solvent powers of chloroform, makes the following very interesting statement.

An ounce (480 grs.) of Spanish flies in powder, and two ounces of chloroform, were macerated together for forty-eight hours, and thrown on a glass percolator, the diaphragm of which consisted of a thick sheet of lint, and fitted with a cover to prevent loss by evaporation. The superior density of the menstruum causes the flies to float in it, for which reason it is better, after the solution has drained off, to place a heavy diaphragm on the flies, and return the solution to the percolator; after it had passed a second time, a little chloroform was added, and finally alcohol ·835, until all the first menstruum has passed, which is known by the difference in density and colour of the alcoholic liquid, which contains the brown colour left by the chloroform.

By spontaneous evaporation, the dark green chloroform solution yielded a crop of crystals of cantharidin, admixed with the green fixed oil peculiar to the insect; the whole residue weighed forty-three grains. After standing forty-eight hours, that the crystals might have time to separate, the whole was thrown on several thicknesses of filtering paper, to absorb as much as possible of the oil. The crystals were then dissolved in a mixture of chloro-

form and a little alcohol, and by spontaneous evaporation were obtained in nearly a pure form.

The particular merits of chloroform as a menstruum in obtaining cantharidin, are, that it is a better solvent than ether or the oils; that a less quantity can be used with more effect, employing alcohol to displace it, and that the cantharidin crystallises more readily from chloroform than from ether. The expensiveness of chloroform precludes its use in the preparation of the ordinary blistering liquids, or tissues, but where the object is to isolate the cantharidin, the advantages above-mentioned, together with the fact that most of the chloroform may be regained by distillation, will render its use altogether eligible.

Cantharis Vittata. Not being aware of any chemical examination of this insect with a view to demonstrating the existence of cantharidin in it, I have applied the solvent property of chloroform to this purpose. One hundred and twenty grains of the flies, reduced to powder, were percolated with chloroform, slowly added, until three times the weight of the flies had passed. The tincture had a greenish brown colour, the brown predominating. A few drops of this, by evaporation on glass, deposited a coating of minute crystals visible to the eye; and their shape was discoverable with a common lens. The whole of the chloroform solution was then suffered to evaporate in a suitable vessel, and yielded a residue of twelve grains. This consisted of crusts of minute crystals, admixed with a greenish brown fixed oil, the latter in much less quantity than the green oil obtained in the same manner from Spanish flies. The whole was laid on thick filtering paper to absorb the oil, the crystalline matter dissolved in a little chloroform and alcohol mixed, which by spontaneous evaporation yielded it in a much purer form, though not entirely colourless. The cantharidin appears to be associated with less fixed oil in the potato fly, than in the Spanish insect; the oil has much less colour, and is more fluid. The cantharidin separates in sword-shaped prisms, terminated obliquely.

Mylabris Cichorii. Having in my possession a specimen of the Spanish blistering fly, mylabris cichorii, the same trial was made with it. One hundred and twenty grains, in powder, were percolated with chloroform till exhausted. The solution possessed a deep brown colour, without a tinge of green. A few drops evaporated yielded a crop of crystals admixed with a transparent brown oily matter. The crystals were larger than those yielded by either of the preceding flies under the same circumstances. The tincture was then suffered to evaporate spontaneously, and yielded an oily crystalline residue, weighing fourteen grains. The crystalline matter was separated from the brown oil by absorption with filtering paper, and was purified in the same manner as in the preceding experiments. The crystals corresponded in shape with cantharidin from the two varieties of cantharis.

In stating the weight of chloroform extract obtained from each of the three species of insects examined, no conclusive evidence can be drawn relative to their activity, as in the two first experiments the flies were not exhausted. Besides, the amount of oil and colouring matter varies; and, as in neither case was the whole of the cantharidin isolated from the extract, its absolute amount is undetermined. The fixed oil must be well pressed out from the crystals before purifying them by recrystallisation.

In order to feel assured that the substances obtained were really the blistering principles of the insects, a small quantity of each, mixed with a little oil, was applied to my arm, and left on for eight hours. Vesication had occurred before their removal in each instance, but more perfectly with the Spanish and Chinese flies than with the indigenous variety, owing, as was afterwards observed, to the crystals of cantharidin in the latter substance not being properly comminuted and disseminated through the oil. On the application of cerate, however, they were all equally developed. [*American Journal of Pharmacy.*]

CAFEIN: ITS CITRATE AND LACTATE.

The high price of cafein is at present an insuperable obstacle to its general use in medicine; but it appears from an article in the *Journal des Connais. Medico-Chi.*, for the 1st of April, 1851, that if it were economically prepared on a scale sufficiently large to admit of its therapeutic properties being fairly tried by different practitioners, some important results might be obtained. The citrate and lactate, but especially the former, seem to merit clinical investigation.

SULPHATE OF ZINC AND TANNIN COMBINED IN LOTIONS AND OINTMENTS.

It can be no objection in practice to the combination of these substances, that the sulphate of zinc is decomposed, provided it appear that by the combination we obtain a better astringent than is afforded by either separately. We are inclined to think that Ricord and others are right in supposing this to be the case. In gonorrhœa, Ricord frequently prescribes the following as an injection to be used two or three times daily; and it is obviously applicable as a lotion to other cases. Take of tannin and sulphate of zinc, each one gramme; rose water two hundred grammes. If the sulphate of zinc be perfectly pure, the solution will be colourless; but if (as is generally the case) it contain some oxide of iron, it will be of a deep red hue, from the formation of a tannate of the oxide of iron, which, being a good astringent, does not injure the lotion.

In France, ladies who suffer from leucorrhœa and relaxed vagina use a famous pomatum, known as the *pommade virginale à la Comtesse.* The basis of this nostrum is also a tanno-sulphate of zinc. The following is the formula for the preparation of this pommade. Take of sulphate of zinc, forty grammes; galls, and cypress-nuts, and pomegranate-bark, of each twenty grammes; myrtle leaves, and sumach, of each thirty grammes. Pulverize them: and mix them in rose ointment, the quantity used depending on the degree of astringency required.

NITRATE OF SILVER CAST IN BALLS.

Dr. Gideon Smith thus describes his method of using the solid nitrate of silver. He casts the salt in ordinary pistol and musket bullet-moulds. "Fuse the salt (crystallized) in a porcelain capsule, warm the iron bullet mould, and cast as you would a leaden bullet. You can then cement the bullet firmly, to a wood or other holder, with black sealing wax. In this form it presents a smooth surface, and you can make it as large as you please; and in the application of it to erysipelatous inflamed surfaces this is important. With the small bullet you can touch the surface of the eyelids, in scrofulous conjunctivitis, and the erysipelas of the face, very comfortably; and, let me add, with infinitely more effect than with the solution. In applying the nitrate to the cervix uteri, and the vaginal cavity, I use the ball attached to a rod sheathed with a glass tube; withdrawing the ball into the tube until I have reached the extremity of the cavity, then projecting it, I sweep the cavity around the cervix circularly, gradually working it outwards until the whole or such part of the cavity has been touched as I desire, then withdraw the ball into the tube, and withdraw that. By this means I save entirely the disagreeable and painful use of the speculum; and by shielding the ball with the glass tube, I avoid touching the external parts, or any part not desired to be touched. To old ulcers and sores, I use a nearly saturated solution of the nitrate with the happiest effect. I wet the whole diseased surface with a camel's-hair pencil, dressing afterwards with lint." *Boston Medical and Surgical Journal*, 23rd April, 1851. The method of Dr. G. Smith has obviously many and great advantages.

THE HOSPITALS OF LONDON. No. VII.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, AT BROMPTON.

Consulting Physicians — Dr. Forbes, F.R.S., Dr. C. J. B. Williams, F.R.S., Dr. Walshe.

Physicians — Dr. Hamilton Roe, Dr. Theophilus Thompson, F.R.S., Dr. Cursham.

Assistant-Physicians—Dr. R. P. Cotton, Dr. R. Quain, Dr. J. Hutchinson.

Consulting-Surgeon—W. Fergusson, Esq., F.R.S.

Resident Medical Officer—Vertue Edwards, Esq.

It has always been a maxim—and a very proper one—with the general hospitals of our metropolis, *to do the greatest possible amount of good to the greatest possible number of individuals;* and this has led unavoidably to the rejection of certain chronic and other affections, ordinarily looked upon as incurable, from their portals. Consumption having been necessarily included in this list, phthisical patients have long required some institution where medical skill might be sedulously devoted to their relief, and, after this may have failed, where tenderness and care might soothe their passage to the grave. In the hospital at Brompton, these objects are combined—both an hospital and an asylum are offered to the consumptive sufferer; whilst an opportunity is afforded, for the first time in this country, for extended scientific and practical observation upon a disease which annually destroys at least one in every 300 persons.

In the patronage given to this charity, England has set a brilliant example to other nations; for, notwithstanding the universality of consumption, no other hospital exists for its reception, except at Rome, where that of St. John in Laterano, containing 400 beds, admits females affected with phthisis; but it is not exclusively devoted to this disease, a certain proportion of the beds being employed for cases of fever.

The benevolent scheme of founding an hospital for consumption, in this country, was first entertained by Philip Rose, Esq., and communicated to several friends; and these gentlemen have now the satisfaction of seeing the fruit of their early efforts in the permanent establishment of the present institution.

In the year 1842, the charity commenced its operations in a private house in Chelsea, capable of containing twenty patients, and having a small out-patient department. But it was not destined to a long continuance in such comparative insignificance, and in so limited a sphere of action. In the summer of 1844, H.R.H. Prince Albert laid the foundation stone of the present building, which was completed in 1846.

The style of the building is worthy of remark, since it was the first attempt to adapt the collegiate and domestic architecture of England, as it prevailed towards the close of the fifteenth century, to the purposes of a modern hospital. It probably suggested itself to the mind of Mr. Francis, the architect, that something of a more cheering and inviting character than the plain and massive edifices of the present day was desirable for an hospital which was intended as the future scene of a somewhat unusual share of gloom. The architecture is Tudor. The walls are of red brick, with blue headers, interlaced in pattern; and Caen stone dressings are applied to the gables, windows, buttresses, etc. In form, the building resembles the letter H, consisting of a centre and two wings; one wing, however, yet remains unfinished. In the quadrangle facing the high road, the plainness of the walls is relieved

by oriel windows, buttresses, and battlements, and a tower with octagon turret rises from the centre; the doorway is deeply recessed and its top battlemented. The centre of the building is chiefly devoted to domestic and business offices; and the two wings are principally intended for male and female patients respectively. The wards differ in size, being constructed to receive from two to ten patients in each; they are light and lofty, and afford upon an average 950 cubic feet of air to every patient. The total accommodation, at the present time, extends to forty-five beds for males, and the same number for females; but the hospital will contain, when completed, not less than two hundred patients. All the window-sashes are fitted with double panes of glass, for the preservation of warmth and the avoidance of drafts; and there is a large corridor upon each gallery, well warmed and ventilated, where the patients can take exercise when unable to walk in the grounds attached to the hospital.

The mode of heating and ventilating the building occupied from the very first the anxious attention of the managing committee. The whole subject was referred to Dr. Arnott, under whose direction the present arrangement was carried out. It consists of an apparatus for propelling air warmed to a regulated temperature through the entire building. The warming and ventilating chamber is in the basement of the building under the central tower, and contains:—

1. A steam-engine for working the pump.
2. A pump for drawing in the external air, and propelling it through the building.
3. A series of copper plates arranged in a large chamber, so constructed that hot water passes freely between them, and imparts its heat to the air immediately after it has escaped from the pump.
4. Channels for conveying the heated air to every part of the building.

Two thousand one hundred and sixty cubic feet of air per minute are thus drawn from the exterior of the building, and forced between the heated copper plates, which are placed between the pump and the main channel. The admission of the air thus warmed into the wards and corridors, is regulated by a number of openings close to the floor, whilst its escape is provided for by one or more of Dr. Arnott's valves introduced into the chimneys. The fireplaces are not absolutely required for this arrangement, and therefore are generally kept closed.

Such is a brief sketch of this ingenious method of combining the heating and ventilating processes. A difference of opinion, however, has long existed as to its efficiency. Whether or not this is attributable to a defective manner of pursuing it, is equally disputed; and the whole subject of ventilation to be applied to the new wing is, as yet, under consideration.

The chapel, which is an elegant specimen of ecclesiastical architecture, built from the designs and under the direction of Mr. Lamb, was munificently founded by the Rev. Sir Henry Foulis, Bart., and consecrated in 1850. This building is likewise of the style of church architecture as it prevailed about the end of the fifteenth century. It is divided into nave, transepts, and chancel. The roofs are of arched wood framing, and the spandrels filled with tracery. The sittings are divided into classes; those in the chancel are for presidents or clergy; those next the transepts, for the governors and officers of the institution; and behind these are the seats for the patients. The whole of the seats are cushioned. All the fittings are of oak, and in appropriate positions are decorated with the arms and crest of the founder. Most of the windows have been filled with stained glass, presented by patrons of the institution. The chapel is approached by a corridor from the entrance hall, which, together with the chapel itself, is warmed by hot water.

Having described the general purposes and character of the building, at a greater length than may have been usual in this series of hospital records, but in a manner which could scarcely have been abridged, and may not,

perhaps, be deemed uninteresting, in consequence of its novelty, it remains that we should add some remarks upon its medical reputation as an hospital and school.

We might point to the "First Medical Report of the Hospital for Consumption" as an evidence of the zeal and ability of its medical officers. This publication, which has received the general approbation of the profession, and which was noticed in this JOURNAL (vol. for 1850, p. 37), was founded entirely upon the statistics of the hospital, and resulted from the *combined* efforts of the physicians and assistant-physicians,—a result of harmony and good feeling amongst colleagues, of which we hope, in coming years, to see many similar examples, not only in this, but in other hospitals. Observations upon a still larger scale, and embracing points not yet treated of, are steadily progressing at Brompton, and we look forward with no little pleasure to the appearance of the Second Medical Report.

In order to supply materials for these reports, a very perfect system of registration of cases, embracing their history, progress, and treatment, is carried on by two resident clinical assistants upon the in-patients; and a complete statistical record of the out-patients is likewise adopted by the assistant-physicians.

The following tables, derived from the hospital books, illustrate the kind and extent of these observations.

TABLE I. IN-PATIENTS.

OBSERVATIONS.

Date.	No.	Name.	Age.	Sex.	M. or S.	Mode of living.	Colour of hair & eyes.	Fingers clubbed.	Predisposition.*	How long ill.	Previous diseases.†	Catamenia.	Hæmoptysis.	Pulse.	Respiration per minute.	Cough, how long.	Expectoration.‡

N. Sweats.	Diarrhœa.	Urine.¶	Height.	Weight.	How long losing flesh.	Capacity of lungs.	Disease.	Complications.	Treatment.	Result.	Date of Discharge or Death.	Remarks.

* Under this head are arranged the various grades of relationship, viz., father, mother, etc.
† This is divided into "Nature of" and "How long since."
‡ Includes "character" and "quantity."
¶ Under this is given the Sp. gr., Quantity, Acid, Alkaline.

TABLE II. OUT-PATIENTS.

Date.	No.	Initials.	Age.	Sex.	M. S. or W.	Character of			Has had			Predisposition.	Disease.	Complications.	How long ill.
						Occupation.	Residence.	Living.	Scrofula.	Rheumatism.	Syphilis.				

Parts most affected.	Hæmoptysis.	Catamenia.	Pulse.	Respiration.	Height.	Weight.	Vital capacity.	Treatment.	Result.	Duration.	Remarks.

Careful and extended notice is also taken of the post-mortem appearances of fatal cases; a leaf of the book kept for this purpose is here transcribed.

TABLE III.

No.	Case Book.	Name and Age.	Date and Weather.	Hours after Death.	Rigor Mortis.	Condition of the Body.	Brain.	Lungs.	Air Passages.	Pleura.

Condition of the Heart.	Alimentary Canal.	Liver.	Spleen.	Kidneys.	Organs of Generation.	Glands.	Remarks.

A pathological museum is in progress of formation, which must ultimately contribute important aid to the study not only of phthisis, but of other tuberculous diseases.

Pupils are admitted to the hospital practice, and some of the medical officers have already delivered lectures upon the diagnosis and treatment of phthisis; and hopes are entertained of thus rendering the charity useful as a school for the study of diseases of the chest.

Since the opening of the new building, 1,524 in-patients have been admitted; and between 3,000 and 4,000 persons attend annually as out-patients.

The in-patients are chiefly the subjects of phthisis; but sufferers from other diseases of the chest are frequently admitted. No selection is made of cases, so that phthisis may be studied in all its different phases. The period for patients remaining in the hospital is limited to three months; but cases which have arrived at the very last stage, and must soon close in death, are not dismissed at the expiration of this time; and the physicians are privileged to recommend an extension of residence to any particular cases, by which the purposes either of charity or medical science are likely to be advanced. The out-patients are not so limited as to the nature of their cases, any form of real or supposed thoracic disease being considered within the operation of that department: heart affections, dyspepsia, bronchitis, asthma, etc., are consequently common amongst them, and afford an excellent field for comparative diagnosis.

Cod-liver oil is pretty generally administered, in some form or other, by all the medical officers, whose good opinion of its effects, as originally expressed in their Report, still remains unshaken. This cannot be better shown than by the extent to which it is employed. In the year 1849, £260 were expended in this medicine alone; and during the first quarter of the present year, 156 gallons were disposed of. The best pale-coloured oil only is used; none of an inferior quality being now ever received into the hospital. During its administration, the patients are carefully and periodically weighed; and the results compared with the other symptoms. Some of the physicians have employed other animal and vegetable oils; and will, it is hoped, inform the profession of their comparative effects, when such have been sufficiently tested.

In closing this account of the Brompton Hospital for Consumption, we have only to express our approbation of the scientific and charitable zeal evinced in its operations. On future occasions, we hope to be able to place before the profession occasional reports upon the interesting points which must ever be presenting themselves to the notice of the physicians.

THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

[*With two Woodcuts.*]

In our last number (p. 688), we mentioned that the first stone of this Hospital was laid by his Royal Highness Prince Albert, on Wednesday the 25th of June last. We now propose to give a brief notice of the history and objects of the institution.

The City of London Hospital for Diseases of the Chest was established in June 1848; and differs in some degree in its objects from the Hospital for Consumption at Brompton, being established for the treatment of all forms of pulmonary and cardiac disease; while the hospital at Brompton was originally intended to be limited to the reception of cases of consumption. This rule, however, as we have stated, is not rigidly acted upon at Brompton. We think the promoters of the new hospital have done wisely, in deciding to admit to its benefits persons labouring under all forms of affection of the chest. Owing to the great prevalence of consumption in this country, the number of persons applying for relief, to any institution specially devoted to the treatment of that disease, will almost necessarily exceed the amount of accommodation; and thus many persons will constantly be waiting for admission, and comparatively few will be received till after the period has gone by during which medical treatment can be of much avail: and we can conceive few things more disheartening, both to the patients and their medical attendants, than to see constantly around them only those who are sinking rapidly under incurable disease, or whose sufferings are only susceptible of very partial alleviation.

Of late years, the number of institutions specially devoted to the treatment of particular forms of disease have too much increased; but, within just limits, we conceive that the practice is conducive to the advancement of medical science. Such institutions should, however, be limited to the reception of cases which require, for various reasons, to be placed apart from the mass of cases in a general hospital, or of which the cure can be best conducted in wards specially adapted for the purpose. They should embrace a sufficiently wide field of observation; and the attention of the medical men connected with them should not be too exclusively directed to the study of the class of diseases, for the relief of which they are established. The former of these requirements is, we think, fulfilled in reference to the institution in question; and of the seven medical men attached to it, five are connected with large general hospitals. The out-patient department has as yet only been in operation; but we observe by the reports that already 9,000 persons have been under treatment, and that the daily attendance of patients varies from 70 to 140; facts which sufficiently attest the want which existed for such an institution in the eastern portion of the metropolis. Though the hospital has been so short a time in operation, it has already been deprived by death of the services of two of its medical officers, Mr. Aston Key, the consulting surgeon, and Dr. Allen Williams, one of the acting-physicians. The present medical staff is as follows:

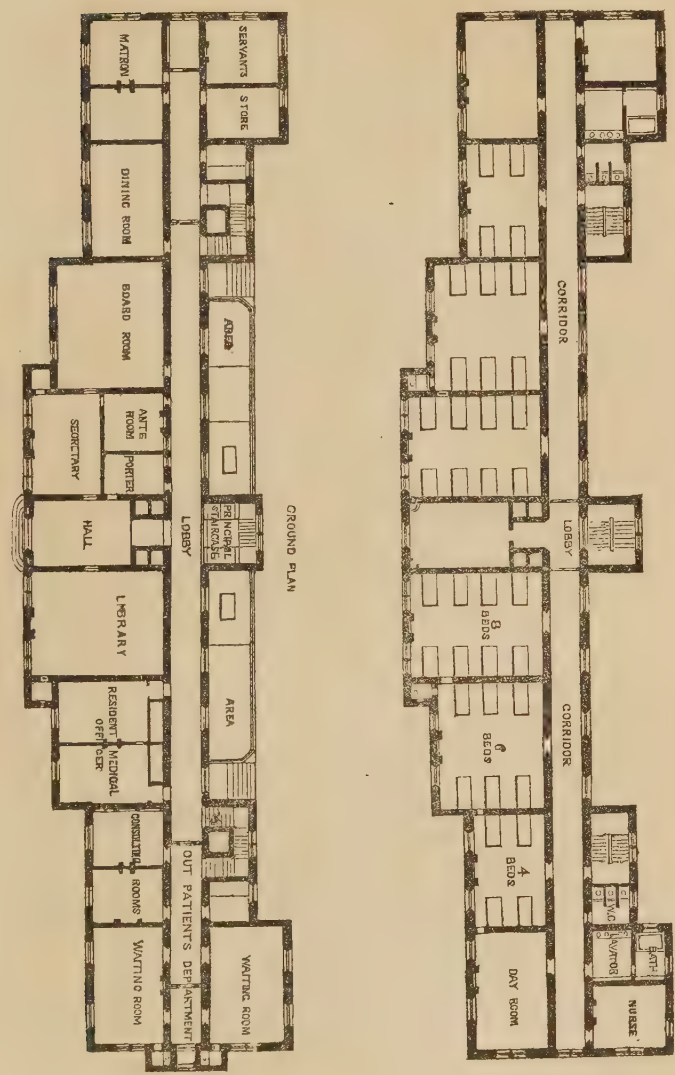
Consulting Physicians. Dr. Babington, and Dr. Jeffreson.

Physicians. Dr. Peacock, Dr. Bentley, Dr. Risdon Bennett, and Dr. Birkett.

Surgeon. Mr. Hilton.

It would be premature at present to speak of the institution as a field for medical study; but, with its present large number of patients, the opportunities for investigating the various forms of disease of the respiratory and circulatory organs must be considerable; and when the hospital is completed, its sphere of usefulness will be greatly extended. A system of statistical registration has been in use since the first opening of the dispensary, and will in time yield valuable results; and there already exists a collection of

Elevation of the City of London Hospital for Diseases of the Chest, Bonner's Fields, Victoria Park.



Plans of the First and Second Floors, showing the accommodation for In-patients.

preparations illustrative of cardiac and pulmonary affections, and which, though small, contains some rare and interesting specimens of disease. We trust that when fully in operation, the institution will form an useful school for the study of the particular class of diseases for the relief of which it has been established, and that it may conduce, along with the sister institution at Brompton, to the advancement of our knowledge of those affections.

The Hospital, the erection of which is now actively proceeding, will be situated immediately adjacent to the principal entrance to the Victoria Park, where a plot of ground, upwards of three and a half acres in extent, has been obtained from Government. This site is in every respect a favourable one. Its vicinity to the centre of the city, and to some of the most crowded and unhealthy districts of the metropolis, will render it easy of access to those who are likely to avail themselves of its advantages; while, being well drained, on a deep bed of gravel, and immediately adjacent to the park, it must ever be a dry, open, and healthy situation. The building has been designed of red brick and stone, in the style which prevailed at the early part of the last century. The central portion only will be first erected, and will contain wards for eighty patients, and full accommodation for the out-patients' department. The wards, which will be situated on the first and second floors, will be arranged for four, six, and eight beds each; the space allotted to each patient varying from 800 to 1200 cubic feet. A day room will be provided for each set of wards, in which patients capable of leaving their beds may sit and take their meals, apart from those more severely indisposed; and wide, lofty, and cheerful exercising corridors will occupy the whole length of one side of the building. Hot and cold water will be supplied throughout, and two complete sets of baths will be placed on each floor. Separate waiting rooms for males and females, with other accommodations, will be provided in connexion both with the consulting rooms and dispensary.

The ventilation of the building will be effected by a fresh air shaft, placed about fifty feet from the hospital, and raised twelve feet above the ground. This will lead into a chamber extending under the whole length of the basement, and sufficiently large to admit of being entered for cleansing, etc. By the side of this chamber will be placed a second, of the same dimension, with which it will communicate at frequent intervals. The air in this chamber will be warmed by hot-water pipes in connexion with a boiler and furnace, and will be thence distributed by flues which pass direct from the chamber into all the wards and corridors. The foul air will be extracted by a shaft passing up a lofty campanile, into which ducts will open from all parts of the building, and in which an ascending current will be maintained by means of a coil of hot-water pipes, heated by a separate furnace and boiler situated in the basement. The communications between the chambers in the basement will be so arranged, that a larger or smaller proportion of hot or cold air may be thrown into any part of the building; and a provision will be made, by which the whole current of air may be passed from the chambers into the exhausting shaft, in order that the air chambers may be kept pure and free from damp. Standard thermometers will be placed so as to show the temperature of the air; and an apparatus will be introduced, to regulate its hygrometric condition.

The hospital was designed by Mr. F. W. Ordish, and the plan was selected out of twelve presented in competition. The sum of £1,200 has already been expended in the enclosure of the site, and tenders have been accepted for the erection of the building at a total cost of £10,732. Mr. Joseph Paxton, the architect of the Crystal Palace, has furnished a design for a Sanatorium, to be erected at the back of the hospital, of glass and iron, and used as an exercising garden by the patients during cold weather. It is proposed to consist of an elegant building, 212 feet long, 72 wide, and 45 high, with a circular roof, on the ridge and valley principle. The interior will be divided

by a partition, 12 feet high, into two equal portions, having separate communications with the hospital, so that the male and female patients may take exercise at the same time. During cold weather, the air will be admitted by flues, running under the floor and up the partition. The requisite degree of warmth will be obtained from coils of hot water-pipe placed in the partition; and at the top of the building there will be a series of apertures, through which a portion of the air will escape, while another portion being cooled by its contact with the glass, will sink and re-enter the air-flues, so that the fresh air will be gradually diffused over all parts of the interior of the building, and a constant and agreeable current will be maintained, while all direct or cold draughts will be avoided. In summer, the warming apparatus will of course not be required, but ample ventilation will result from the effect of the sun upon the glass. The fresh air will then be admitted at the sides of the building, and in front of the apertures will be placed a screen, which, while it will interrupt the direct current of the air, and cause it to diffuse itself over the interior, will afford support to the roof. It is proposed to regulate, by a special apparatus, the amount of moisture to be contained in the air, both during summer and winter, and the conservatory will be stocked with plants which will flourish in the atmosphere maintained. The cost of the erection of the sanatorium is estimated by Mr. Paxton at £4000.

We do not suppose that the managing committee of the hospital will be disposed to take any part at present in the carrying out of Mr. Paxton's suggestions, nor would it indeed be desirable for them to do so till the hospital is advancing towards completion; but we hope the medical officers will give the plans their attentive consideration, and be prepared to urge upon the committee the erection of the sanatorium so soon as the financial condition of the charity will admit. For ourselves, we think Mr. Paxton's proposition, if carried out, would materially increase the means of usefulness of the institution. Among the many persons who in this country suffer from consumption, or other chronic pulmonary diseases, there are indeed very few who can afford to spend the winter at Malta, Madeira, or the south-west coast of our own island; and in the inferior grades of society, any change is often unattainable; and thus it too frequently happens, that complaints which, under favourable circumstances, are readily and completely curable, become, from too early exposure to the vicissitudes of our climate, or to the fruitful sources of disease which abound in the homes and workshops of the poor, either the cause of permanent indisposition, or of premature death. To all persons so circumstanced, the opportunity of resorting, during the cold weather, to a large and cheerful building, in which a pleasant exercising temperature will be maintained, and plants and other objects of interest will be placed, must certainly be very preferable to being constantly confined to their own rooms, provided, however, that the patients be not exposed to the external temperature in going or returning, for otherwise the result would more probably be injurious than beneficial. To the poor, the combination of a well adapted hospital, with a sanatorium of the description suggested by Mr. Paxton, will, we believe, be of great advantage, and we therefore sincerely hope that the plan may be carried out, and the patients of the new hospital be so placed in the circumstances most conducive to their entire restoration to health. In the treatment of consumption, and other chronic diseases, the employment of means calculated to invigorate the powers of the system, and to cheer and refresh the mind, are not less important than the use of direct remedial agents.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 10, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Case of Popliteal Aneurism treated by Compression; with Remarks, and a List of the Cases treated in Dublin. By O'B. Bellingham, M.D., F.R.C.S.I., Surgeon to St. Vincent's Hospital, Dublin. A labourer, aged forty-two, was admitted into St. Vincent's Hospital, under Dr. Bellingham's care in November 1850. The aneurism, which was of large size, was seated in the right popliteal space, had a strong, heaving impulse; and a short, harsh bruit was heard on auscultation. The treatment was commenced by placing the patient upon a very restricted diet, particularly as regards fluids (six ounces only being allowed in the day, with eight ounces of solid food), confining him strictly to the horizontal posture, with a dose of purgative medicine each night. Under this treatment, continued for some days, the pulse, from being hard and incompressible, became soft, small, and slow. Compression was commenced December 4th, at eleven A.M., by means of two instruments, one upon the artery where it crosses the ramus of the os pubis, the other at the lower third of the thigh. At half-past eight P.M., the outlines of the aneurismal sac were more distinct; the patient's skin was cool, and he did not complain of pain. He remained awake during the night, and kept up the compression himself, the points upon which the pad of the instrument should rest having been marked with ink. Next morning, between nine and ten, on unscrewing the instrument, the pulsation of the aneurism was found to have ceased; the tumour was hard, solid, and circumscribed, and an enlarged collateral vessel was felt over the centre of the popliteal region. Moderate pressure was continued for some days; the patient was kept in bed, and the diet was gradually improved. The tumour diminished in size, and became harder; and when the patient returned home, the limb was as strong as the other, and his general health perfectly good.

The author contrasted the results of compression and the ligature, and pointed to the advantages likely to ensue from combining constitutional with local treatment.

In a table appended to the paper, was given a list of all the cases of external aneurism treated by compression in Dublin during the last seven years, in which the seat of the disease was mentioned, the hospital or other locality where the treatment was conducted, the surgeon's name who had the management of the case, and the results were stated. Twenty-six were cases of popliteal aneurism, twenty-one of which were cured; six were cases of femoral aneurism, of which five were cured, the sixth having been a form of traumatic aneurism, in which amputation of the limb was the only resource. Three were cases of brachial aneurism, of which two were cured; in the other, a high bifurcation of the brachial artery existed, and two vessels required to be tied. One was a case of radial aneurism, which was cured by compression. Of the remaining five cases of popliteal aneurism, amputation of the limb was performed in one, the patient recovering; in a second, the ligature was used with success; in a third, the patient was obliged to return to his employment before the cure of the disease; the aneurism diminished in size, and the patient continued to work for above three years afterwards, when symptoms of aortal aneurism supervened, under which he sank. In a fourth, the patient died of pulmonary disease; and the fifth patient, who was of a broken-down constitution, died of erysipelas.

Dissection of a Case in which Two Popliteal Aneurisms had been treated by Compression of the Femoral Arteries. By Prescott Hewett, Esq. A man, aged thirty-eight, was admitted into St. George's Hospital, in the middle of 1848, under Mr. Cutler, with an aneurismal tumour in each popliteal space. That on the right side, completely filling this region, was compressible, but could not be emptied ; that on the left, not larger than a small egg, was hard, and to a great degree apparently solid, and with much less pulsation. The tumour on the right side had only existed three months, and nothing had been done for it. From the account of the patient, it appeared that the disease on the left side, which had begun about eighteen months back, had been treated by compression of the femoral artery, at the Wexford Infirmary, where the pressure had been kept up, more or less, for seventeen weeks. During this time the limb had regained its natural size, and the tumour was reduced to its present state, from which it had never since varied, and had caused him but little inconvenience. His general health, which had begun to give way about two years and a half back, had prevented him from following his business of musical instrument maker. When admitted into the hospital, he was pallid, and apparently suffering from great debility. At a consultation of the surgeons, it was determined, under existing circumstances, that compression should first be applied to the right femoral artery ; and the instrument, a ring tourniquet, was so adapted as only to lessen the circulation of the limb, and to be worn for a few hours daily. In some little time the limb was reduced in size, and the tumour became smaller and firmer ; but pulsation still remained. Some six weeks after his admission, and whilst he was under surgical treatment, cough and expectoration, with difficulty of breathing, made their appearance. Auscultation detected nothing abnormal about the heart, but the lungs were found to be engorged at the back part. The chest symptoms went on increasing in severity ; and the patient one day suddenly brought up a large quantity of arterial blood, and died shortly afterwards. The tumour in the right ham had gone on decreasing in size, and had become firmer and more solid ; but some pulsation was still felt. No change had occurred in the left ham.

At the examination of the body, which took place thirty-one hours after death, the left aneurismal tumour, deeply imbedded in the popliteal space, was found lying between the joint and the artery, of the size of an egg ; it was pyriform in shape, and apparently quite solid, but on cutting into it, the lower half only was filled with long-standing coagula ; the upper part, still presenting a cavity lined throughout by a perfectly smooth membrane continuous with the coat of the artery, merely contained some small recent clots. Of the two openings into the sac, the upper one was large, and nearly of the size of the artery ; the lower one, on the contrary, was much contracted, and scarcely admitted a common-sized probe. The portion of the artery lying upon the sac was also very much contracted, but its coats were healthy, as well as those of the posterior and anterior tibial vessels, which were of their normal size. In the upper part of the popliteal, and in several parts of the femoral, there were large patches of atheroma, with three distinct aneurismal dilatations, one in the former vessel and two of the latter. The femoral artery and vein were pervious in their whole length, and the surrounding cellular tissue was not thickened. The vein and the nerve in the popliteal space were firmly adherent to the sac, with a few of the fibres of the gastrocnemius muscle. The aneurism on the right side, larger than a cricket-ball, was also lying between the artery and the knee, to which it was firmly adherent. It was filled with laminated coagula, except at the back part, where there was still a small channel leading from the upper into the lower part of the vessel ; this channel was rough throughout, and covered with recent fibrine. The upper opening of this channel was free and smooth ; the lower one was small, and below it the artery was reduced to the size of

the posterior tibial. Above the aneurism, the coats of the artery were much thickened by atheroma; and here too, about an inch and a half above the tumour, was another small aneurismal dilatation. The femoral artery presented several patches of atheroma; but it was otherwise healthy, and, as the vein, pervious throughout its whole course: the surrounding cellular tissue was not thickened. With regard to the popliteal vein and nerve, the appearances were the same as those observed on the left side. The thoracic aorta was extensively affected with atheroma throughout a great part of its course, and it was somewhat dilated. In its arch, it presented three distinct aneurisms, one of which, the largest, was lying between the large vessels and the windpipe, into which it had burst by a small ulcerated opening, about an inch above the bronchi: the cavity of this sac was partly lined with long-standing coagula. The bronchi were filled with blood, in addition to which the lungs themselves presented several large patches of pulmonary apoplexy, and were extensively affected with emphysema. All the abdominal organs were healthy, excepting the kidneys, which were somewhat smaller than natural, rough on their surface, and with several small cysts in their structure.

Abstract of the Discussion. Mr. Partridge was inclined to think that the London surgeons were open to the remark of Dr. Bellingham, of having neglected the plan under consideration. In King's College Hospital, pressure had been but little employed, and the result was by no means encouraging. This was partly attributable to the imperfect instrument employed, and partly to the circumstance of the patients being entrusted a good deal with the treatment themselves. Thus, a stout healthy-looking man was admitted into the hospital with a popliteal aneurism, and the management of the instrument was mainly left to himself. He screwed up the instrument so tightly that it eventually broke, but not until a large slough formed on each side of the aneurism, which remained in the same state. A ligature was afterwards applied; the man lost his toes by gangrene, but the aneurism was cured. If he (Mr. Partridge) had such an instrument as that exhibited on the table, he should use it, as it was a great improvement on the one usually employed in London. He inquired the experience of surgeons on the state of the artery after compression had been employed unsuccessfully; it having been urged by some that the artery, after the failure of compression, was not in so favourable a condition for the application of a ligature as before.

Mr. Quain had observed good results from compression in a few cases of popliteal aneurism; and he was favourably disposed to that treatment. He feared that a portion of the remarks in the paper first read were not calculated to conciliate support to the practice it advocated; he alluded to the remarks made in connexion with the statement that surgeons out of Dublin "decry" compression as a mode of treating aneurism. This statement, too, he believed to be erroneous; at least, he had not heard anything that would bear it out. But the question really was not, what is thought in Dublin, or in Edinburgh, or in London, but what was the fact as to the utility of compression in the management of the disease. While he listened to the paper, he was struck by the circumstance that no mention was made of the treatment in question being resorted to in aneurisms, other than the popliteal and femoral. He (Mr. Quain) had seen the late Mr. Liston use compression of the brachial artery in a case of aneurism of the hand from injury. Though the compression was made under favourable circumstances (for it was well applied, and the patient gave every aid to the surgeon), still it entirely failed. The disease in this instance was cured by ligature of the brachial artery. In the operation, this artery was by no means so easily secured as it usually is, owing to the thickening of the cellular substance and fascia by the compression; but there was no such difficulty in the case as would jus-

tify, in his opinion, any opposition to the use of compression upon that ground. He thought, at the time, that the want of success in this instance might perhaps have been attributable to the large nerve which courses over the brachial artery. The femoral artery, it would be remembered, has no nerve in of magnitude in company with it.

Mr. Partridge said that the statistics should state whether the patients were cured or not, and how long they remained well. Dr. Bellingham was right in saying that in London we did not habitually employ pressure, and that there must be some reason for it.

Mr. Quain had seen compression employed successfully in cases of femoral and popliteal aneurism, but at the moment he did not recollect the number of cases.

Mr. Prescott Hewett differed from Mr. Partridge respecting the employment of compression by London surgeons; at all events, he could speak for St. George's. During the last three or four years, there had been five cases of aneurism in the hospital, including the one detailed in the paper before the Society. Two of these were cases of popliteal aneurism, one of which was of very large size. In both cases, compression was applied to the femoral artery, but, owing to some peculiarity in the patient, compression was discontinued, and the artery was ligatured: and both did well. The instruments employed were not so clumsy as had been represented: in both cases, compression was kept up by two tourniquets in two parts of the artery. The patients were under the care respectively of Mr. Cæsar Hawkins and Mr. H. C. Johnson. In neither of the cases did the effects of compression render the application of the ligature more difficult. The third case was one of diffuse aneurism of the ulnar artery, consequent upon a wound; in this case, the tourniquet was applied over the brachial. He did not think that the failure in Mr. Liston's case of aneurism in the hand was attributable to the contiguity of the nerve to the brachial artery; for, in the case in St. George's, the pressure was applied over the brachial, and the patient was cured in a fortnight. In the fourth case, compression was tried, and acted apparently with good effect; but in two or three months the pulsation was again detected; the patient was unwilling to submit again to pressure; the artery was consequently ligatured, and a cure effected. The fifth case was the one related in the paper before the Society. In answer to Mr. Partridge, respecting the influence of compression on the after operation of ligature, he might say, in the case operated on, there was no thickening of the sheath surrounding the vessels.

Mr. Curling would have no disinclination to try compression, when a suitable case presented itself. It was a valuable plan of treatment; and the Society was indebted to Dr. Bellingham for bringing it forward. The instrument on the table was not sufficiently known in London. He thought, that in cases of compression on the femoral artery, obliteration of the vein, as in the case mentioned by Mr. Quain, might be avoided by having the pressure applied either just above or below Poupart's ligament. The instrument required management. Where did Dr. Bellingham apply pressure on the femoral artery? He thought Mr. Quain's observations respecting the brachial artery would be borne out by other cases. The pain would be very severe from pressure upon the nerve.

Mr. Cock said that his experience of pressure was limited to two cases of popliteal aneurism. In these cases, the only reason he believed the plan did not succeed was, that the patients did not persevere in the employment of the means—one discontinuing it in four, the other in six days. There was no reason to doubt that if the patients had gone on, they would have got well. The instruments employed in Guy's Hospital were by no means so perfect as the one on the table, and were more irksome. In each of the cases to which he had referred, the femoral artery was tied at the urgent request of the patient. Both patients got well; but in one case the

operation was rendered somewhat more difficult from some thickening and inflammation of the sheath of the vessels. Beyond this, the pressure had not interfered with the application of the ligature. He (Mr. Cock) had no doubt that the failure of the pressure in these cases, and the inability of the patients to bear it for any length of time, had arisen from the clumsy character of the instruments, and the bad manner in which they had been applied, The patients in these cases had not been sufficiently watched, and were seen only daily or every second day. Much more watching and care was required in the proper management of these cases than were usually bestowed on hospital patients, and to a neglect of these the failure in the cases he had related might fairly be attributed, as well also to the neglect of instructing the patient carefully in the mode of applying the pressure. He thought, however, that pressure in the treatment of aneurism would soon be much more extensively employed in London than it had been.

Mr. Hodgson hoped, that if Dr. Bellingham were in the room, he would give some further particulars of his mode of treatment. He thought the profession in England were very much indebted to their Dublin brethren for the great attention they had bestowed on the treatment of aneurism by compression, and to the improved method they had carried out. They had rendered compression much less irksome by the form of apparatus which they employed, and their substitution of an elastic material, like india-rubber, for an inelastic one. Another point alluded to was the application of pressure at two distinct points, so that pain and weariness might be prevented by changing the place of pressure.

Dr. Bellingham referred to some casts on the table of a limb taken before and after pressure had been applied to it, to cure aneurism. In one case, a popliteal aneurism was cured in twenty-four hours; but an aneurism of the opposite side presented itself, and took a much longer time to cure. The patient eventually died from aneurism of the descending aorta. The artery over which the pressure had been applied was found quite normal; the aneurism was obliterated; the vein was normal. In another case, in which pressure had been applied to the femoral artery for popliteal aneurism, galvanic punctures having been also employed, the patient had died, at the end of ten days, from erysipelas. The aneurism was found nearly filled by layers of fibrine; the artery under the seat of pressure was healthy. He had dissected a patient who had suffered from aneurism in both popliteal arteries. One of these was treated by compression; the other by ligature. The latter returned at the end of three or four years; not so the former. The vein and artery were found healthy. It was difficult to apply pressure to the femoral artery, without involving the vein in the compression. In almost every case which he had treated by compression, the pressure had been made at two or more points. He begged to say, that his observations referred to the Edinburgh surgeons; not to those of London, on whom he had no cause to reflect. In the list of cases which had been alluded to in the reading of the paper (but had not been read) instances were recorded, in which the radial artery was the seat of aneurism, and which had been cured by pressure made on the brachial artery. [Dr. Bellingham sat down, amid much applause.]

Tuesday, June 24, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

On some Secondary Physiological Effects produced by Atmospheric Electricity. By Professor C. F. Schonbein. After referring to the more obvious effects of electricity upon the organs of sensation, and more especially those of smell and taste, and stating his belief that the peculiar odour observed when an electrical discharge takes place, or in the neighbourhood of points from which electricity is passing, is not due to the electricity itself, but caused by the presence of a peculiar matter which he had named ozone,

the author stated the opinions held respecting it—viz., that either pure or atmospheric oxygen, when exposed to the action of electricity, is transformed into this odoriferous body, which he was at first inclined to consider a peculiar peroxide of hydrogen, but which other eminent chemists believe to be merely an allotropic modification of oxygen. With reference to its exact composition he declined, however, to give a decided opinion. This body is a most powerful oxidizing agent; at ordinary temperatures oxidizing silver, forming iodic acid from iodine, nitric acid from nitrogen; converting the acids ending in *ous* into those which end in *ic*, the salts which terminate in *ite* into those which end in *ate;* metallic sulphurets into sulphates. It decomposes the gaseous components of hydrogen with sulphur, selenium, phosphorus, iodine, arsenic, and antimony, and exerts many other energetic chemical actions, both on organic and inorganic substances. It has a strong electro-motive power, similar to that of chlorine, bromine, and iodine; and lastly, it has certain physiological effects upon the animal system, similar to those of chlorine and bromine, acting powerfully as a poison, even in minute doses. Ozone is being constantly generated in the atmosphere by the electrical action going on. When in excess, it has a sensible effect upon the mucous membranes of those exposed to its influence, and its presence is indicated by starch containing the iodide of potassium being turned blue. The author availed himself of this fact in the construction of his ozonometer, which consists of a box containing test-paper thus prepared, and a chromatic scale. He believed that certain catarrhal affections were produced by the presence of ozone in the atmosphere, and he had, with the assistance of medical friends, ascertained the co-existence of unusual prevalence of catarrh with what he termed his *blue days*. The author then referred to the existence of poisonous miasmata in the atmosphere, which are generated by certain "purely chemical, or physical, or physiologically chemical actions", taking place within the earth, or on its surface, in stagnant or running waters, or in the atmosphere itself. Of these poisonous gases or vapours, there are two sorts which are antagonistic to and destroy each other. Of the first class, sulphuretted, and perhaps phosphuretted hydrogen, alone, are produced by natural causes, and in such minute quantities that they do not, except in a few localities, exert any general influence upon animal life. Of the second class, there is one, namely ozone, which exists in appreciable quantities in the atmosphere. But the abundant source of gaseous matters, is the decomposition of vegetable and animal substances. Some of these are well known, such as carbonic acid and ammonia; others are of unknown chemical nature, and though the absolute quantity of such deleterious matters may be small in comparison to the immense volume of the atmosphere, their accumulation would render the air unfit for the support of animal life, unless some agent neutralized or decomposed them. The purification of the atmosphere which we attempt to effect on a small scale by chlorine fumigations, is accomplished in the great processes of nature by the agency of ozone, a task for which it is peculiarly fitted by its high oxidizing powers. He gave the details of some experiments upon air tainted by putrid flesh, which was purified by ozone disengaged by the action of moistened phosphorus. Ozone decomposes the oxidizable miasmatic gaseous matters which contaminate the air, and thus the atmosphere is preserved in a state fit for the support of animal life, and, at the same time, the ozone, which, if allowed to accumulate, would become deleterious, is in its turn neutralized or decomposed by the miasmata.

During a thunder-storm, large quantities of ozone are formed; and the author supposed that the unhealthy state of the atmosphere which exists in the hot season of the year, may be caused by the accumulation of miasmata produced by animal decomposition; and that it is by the generation of ozone that thunderstorms purify the air. The author considered that there are probably certain states of the atmosphere, in which the quantity of ozone does not bear a due proportion to the miasmata it has to act upon, and that

under such circumstances it is that certain diseases—cholera, for instance—make their appearance. He was also of opinion, that in the winter there is more atmospheric ozone than in summer, and that the higher strata of the atmosphere contain more than the lower; and as the generation of some diseases, such as the yellow fever, appears to be connected with certain seasons and geographical positions, he thought that by an extended series of observations, it might be ascertained whether these diseases bear any relation to the ozoniferous state of that portion of the atmosphere where they happen to occur. The paper concluded with a reference to experiments, which proved that ozone produced by the action of electricity or by the agency of phosphorus is identical.

On a New Method of treating Certain Cases of Epiphora. By William Bowman, Esq., F.R.S. Some cases of epiphora depend on a displacement of the puncta lacrymalia out of the course of the tears, or on an obstruction of the canaliculi between the punctum and caruncle, the inner extremity of the canals, together with the lacrymal sac and nasal duct, remaining healthy. The author described the exact nature of these cases, and related examples. The treatment consisted in slitting up the canal from the punctum on the conjunctival aspect, so as to carry backwards the orifice at which the tears are received, on to the mucous membrane near the caruncle; the tears are taken up by the remaining portion of the canal, while the end towards the punctum is converted into a groove. For the cases of obstruction from injury or other cause, he suggested a modification of this operation, by which the canal between the obstruction and the sac may be slit up for some way, so as to receive the tears at a new opening. The cases to which these new operations are applicable, have been for the most part abandoned by surgeons as incurable.

Description of an Operation for the Radical Cure of Obstinate Stricture of the Urethra. By Dr. Nevermann of Mecklenburgh. [Communicated by B. Phillips, Esq., F.R.S.] Having tried all methods of treating obstinate stricture, the operation with a trocar catheter appeared to the author the most rational. The patient is placed as for lithotomy, and the catheter introduced as far as the seat of obstruction. The operator introduces one or two fingers into the rectum as a guide to the instrument; he then grasps the handle of the instrument, whose point is exposed, with the right hand, and pushes it steadily and forcibly forwards in the axis of the pelvis towards the bladder. When the resistance is found to cease, the trocar is drawn out and the catheter is left in the canal. In four or six days it is replaced by an ordinary elastic catheter. The paper was accompanied by drawings of the instruments and a description of them.

Case of Obturator or Thyroidal Hernia successfully relieved by Operation. By Henry Obre, Esq. [Communicated by Professor Erichsen.] After commenting on the extreme rarity of this form of hernia, and stating that he had been unable to find any record of its having been detected and relieved by operation during life, the author related a case in which he operated successfully. The patient, a female aged 55, the mother of a large family, was seized with symptoms of rupture. She denied that this was the case, and a careful examination shewed that there was no hernia in the usual situations. A little below the femoral region on the right side, however, there was a degree of hardness resembling a small gland, and deeply seated; with some general fulness about the part. The author saw this patient on the fourth day after the symptoms had begun. At this time, she was suffering extreme pain in the umbilical region; during the previous twelve hours, her vomiting had been stercoraceous and incessant; the countenance pale and contracted; voice faltering; pulse weak, small, and intermitting—in short, all the symptoms of pending dissolution from strangulated

intestine were present. On careful examination, nothing could be detected but a slight degree of fulness in Scarpa's triangle on the right side ; that on the opposite side being well marked. On using firm pressure with the ends of the fingers over the neighbourhood of the femoral artery, and a little below the saphenous opening, a distinct hardness was to be felt, slight in extent, but giving the impression as if the sheath of the vessels was being pressed on. The state of the patient was such as to induce the author to make an incision into the upper part of the thigh, down to the hard structure, in the hope that he might find confined intestine low in the femoral canal. He made a straight incision into Scarpa's triangle, as in the operation for tying the common femoral artery ; beginning about three inches below Poupart's ligament. When the cribriform fascia was opened, and the saphenous opening exposed, no hernial sac was found, but the hardened structure could be felt lying deep to the inside of this opening. The dissection was with some difficulty continued downwards ; the fascia lata was divided, and the pectinæus muscle exposed. The fibres of this muscle were divided transversely for about an inch and a half or two inches, and a hernial sac was exposed, which rose up into the wound to the size of a pigeon's egg. The finger, being passed along the sac, entered the obturator opening. The sac was opened, and the intestine was found to be a portion of the small gut, blue and congested. The opening through which it passed did not tightly enclose its neck, but it was considered prudent slightly to divide the edge. In doing this, the saphena vein was wounded, and it was necessary to apply a ligature to its upper part. This was the only ligature required. After the operation, no medicine was given ; in the course of the day the bowels acted three times, and in a few days the patient had quite recovered.

Some Observations on the Pathology of those Affections of the ear which produce Disease in the Brain. By Joseph Toynbee, Esq., F.R.S. The author had a two-fold object : the first was to point out the nature of the several affections of the ear which produce disease in the brain ; the second, to show that each of the cavities of the ear has its particular division of the encephalon, to which it communicates disease. Thus—

1. Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum.

2. Affections of the tympanic cavity produce disease in the cerebrum.

3. Affections of the vestibule and cochlea produce disease in the medulla oblongata.

1. The intimate relations of the external meatus with the lateral sinus and cerebellum were pointed out ; and the affection most frequently producing disease in these parts was shown to be catarrhal inflammation of its dermoid layer, hitherto classed with numerous diseases under the term otorrhœa. This affection of the external meatus was fully described ; it may endure during many years, without pain or any other symptom of a formidable disease, while the bone may be becoming slowly carious, and portions of the dura mater and cerebellum disorganized.

2. The tympanic cavity is the part of the ear from which disease is most frequently propagated to the brain. This circumstance is accounted for, firstly, by the great liability of the mucous membrane of the tympanum to undergo pathological changes ; and, secondly, by the existence of very intimate relations between this membrane and the dura mater. The affection of the tympanum which most frequently produces disease in the cerebrum, is chronic catarrhal inflammation of the mucous membrane, an affection thus far only known as an otorrhœa. The four changes in the dura mater and cerebrum produced by the affections of the tympanum are—

a. Inflammation of the dura mater, and its separation from the surface of the petrous bone by serum.

b. Ulceration of the dura mater, and its complete detachment from the petrous bone.

c. An abscess in the substance of the cerebrum.

d. Undefined suppuration of the substance of the cerebrum.

From a careful examination of cases, it appeared that chronic catarrhal inflammation of the mucous membrane of the tympanum may exist twenty or more years, without the production of any disease beyond it, or at least without the existence of symptoms by means of which such disease can be diagnosed; nevertheless, in the great majority of cases, vital structures become sensibly affected in a much shorter period.

3. Purulent matter in the vestibule or cochlea sometimes causes disease of the auditory nerve, which is transmitted to the medulla oblongata, producing suppurative inflammation of the meninges, and death, without any caries of the bone.

The author showed the necessity of abolishing the use of the term otorrhœa, and of using in its place the names of the several diseases, eight in number, of which a discharge from the ear is one of the symptoms. The facts which he was desirous of impressing upon the minds of medical men were, that the bone, dura mater, and substance of the brain, may be slowly undergoing disorganization, without the presence of any other symptoms calculated to reveal the existence of formidable disease, than a discharge from the external auditory meatus; and that, consequently, no person suffering from catarrhal inflammation of the dermoid layer of the meatus, the membrana tympani, or of the mucous membrane of the tympanum, can be assured that disease is not being prolonged to the temporal bone, the brain, and its membranes; and that any ordinary exciting cause, as an attack of fever or influenza, a blow on the head, etc., may not induce the appearance of acute symptoms, which, as a general rule, are speedily fatal. Appended to the paper were tables, giving the particulars of sixty-five cases of disease extending from the ear to the brain, in which tables the duration of the chronic and acute symptoms, and the *post-mortem* appearances, were concisely detailed.

A Case of Obstruction of the Colon, relieved by an Operation performed at the Groin. By James Luke, Esq. (Communicated by James Moncrieff Arnott, Esq.) The subject of this report was a man aged sixty, who on December 16, 1850, first complained to the author of feeling generally unwell. He had no pain, but his countenance was depressed, his eyes sallow, and his tongue coated. The bowels were confined, and lately medicines had acted with difficulty on them. An aperient was ordered, and on the following day he passed a small lumpy motion, but without relief to the symptoms; castor-oil was ordered, but after a time was rejected by vomiting. On the 18th, there was no relief from the bowels; and he vomited everything he took. From this time, he progressively got worse, in spite of all the means resorted to for his relief. He complained of pain chiefly about the region of the cæcum. The transverse arch of the colon could be felt distended and tympanitic. A careful observation of the case had led the author to believe, that there was obstruction in the bowel about the sigmoid flexure of the colon, and it was resolved, as a last resource, to operate. The operation was performed on the 23rd. Mr. Luke opened the abdominal parietes near the groin, by an incision four inches in length, a little to the outside of the course of the epigastric artery, the lower extremity of which incision terminated a little above Poupart's ligament. The peritonæum was opened to about two inches. On passing the finger down the surface of the intestine, which now protruded, a diseased mass could be felt, which appeared to encircle the intestines. The bowel was then opened above this part; a large quantity of fæculent matter came away, and the patient expressed himself as relieved. On now passing the finger into the bowel, it was found to be impervious about two inches below the aperture.

After the operation, the recovery of the patient was rapid. On the second day, fæces passed *per anum*, and continued to do so for more than a month, when their passage through the natural opening ceased; it was again partially restored, but from this time the greater part of the fæces passed by the wound. This was closed by a well-fitted pad, and he had been enabled since to pursue his ordinary occupation almost without interruption.

The author then remarked on the danger of protracted delay in relieving such cases; a delay which is, however, to a great extent rendered necessary by the difficulties of diagnosis. The distension of the colon, and the evidence afforded by the proper introduction of the long tube, were pointed out as the two most accurate means for determining the seat of obstruction, when it is situated at the lower part of the colon. The advantages of the operations of Amussat and Littre were then compared, and the author, while admitting the advantage gained by operating in the loins, as proposed by the former—of not opening the peritonæal cavity—yet thought that the operation in the groin offered certain advantages. By the operation in the loins nothing more could be done than opening the intestine; but this might in some cases be improper—as where obstructions were produced by fibrous bands overlying the intestine, or by strangulations, the result of causes acting exteriorly to its tunics. In these cases, the proper treatment is to divide the bands, or relieve the cause of strangulation. In the event, too, of an error of diagnosis, the opening in the loins does not provide any facilities for correcting the error. The danger of total failure of affording relief, consequent upon this state of things, must therefore be attributable as a demerit to the operation in the loins. Besides, the opening cannot be conveniently attended to by the patient himself, and there exists frequently a great disposition to contraction, from the great depth of the wound, which requires renewed surgical interference. With the exception of the necessary peritonæal section, the operation of opening the abdominal parietes at the groin, in all cases of obstruction, or suspected obstruction, in the lower part of the colon, appeared to the author to be preferable. It affords facilities for modifying the treatment, either by opening the intestine, when incapable of relief by other means, or by dividing or removing any existing cause of strangulation. It enables the surgeon to extend his search within a limited range, in the event of the diagnosis proving incorrect; it allows him to open the bowel as close as possible to the seat of obstruction, and it secures to the patient the facilities for attending to his own comfort.

Abstract of a Paper on the Variations of the Sulphates and Phosphates excreted in Acute Chorea, Delirium Tremens, and Inflammation of the Brain. By H. Bence Jones, M.D., F.R.S. Having determined the variations of the sulphates in the states of health when different diets, amount of exercise, and medicines were taken, the variations of the sulphates in disease were examined. At the same time, the total amount of alkaline and earthy phosphates was determined, partly in order to see whether the amount of sulphates and of phosphates bore any relation to one another, and partly to test the conclusions which were drawn in the author's previous paper on the Variations of the Phosphates in Disease. The cases were thus classified:—

1st. Acute and chronic diseases, in which the muscular structures were chiefly affected, as chorea.

2nd. Functional diseases of the brain, as delirium tremens.

3rd. Acute inflammatory diseases of the nervous structures, as inflammation of the brain.

4th. Chronic diseases of the nervous structures.

5th. Acute diseases, in which neither the nervous nor the muscular structures were chiefly affected.

6th. Chronic diseases, in which neither the muscular nor the nervous structures were chiefly affected.

The three last classes gave only negative results.

In illustration of the first class, three cases of most intense chorea were detailed; the urine was examined frequently from the third to the eleventh day. The phosphates were diminished. The sulphates were present in very great excess. The urine was so loaded with urea, that nitrate of urea crystallized out before the urine was concentrated. The specific gravity of the urine was as high as 1036 in one case; 1035 in another; and, in the third, 1031.

In illustration of the second class, three cases of delirium tremens were given. The urine was examined from the fifth to the fourteenth day of the disease. The phosphates were not so remarkably diminished as in the cases reported in the previous paper. The sulphates were exceedingly increased. The amount of urea was so great, that nitric acid caused an instantaneous crystallization. The specific gravity was in one case, 1041; in another, 1037; and in the third, 1027. In other words, there was the most remarkable correspondence between the state of the urine in acute chorea and in delirium tremens.

In illustration of the third class, four cases of acute inflammation of the brain were given. The urine was examined from the fourth to the twenty-sixth day. Though the inflammation was not so intense as in those cases recorded in the author's previous paper, yet they confirmed the statement, that in inflammation of the brain the phosphates in the urine are increased; they also led to the conclusion, that the sulphates are at the same time increased in the same degree.

In conclusion, the author stated, that the phenomenon common to acute chorea and to intense delirium tremens is increased and unceasing muscular action. The muscles are highly complex organic compounds, in which sulphur exists in an unoxidized state, and the muscular action is accompanied, if not caused, by an action of oxygen, which, among other results, gives rise to the formation of sulphuric acid and urea, the amount of oxidation being proportioned to the intensity of the muscular action. The result produced is an increase of the sulphates and of the urea in the urine, just as in health they would be increased, if continued strong exercise were taken. The increased amount of urea does not constitute a disease resembling diabetes, but it is only an evidence of the changes taking place within. The increase of sulphates and phosphates in inflammation of the brain is also an evidence of increased oxidation of the nervous structures. These simultaneous variations depend on the fact, that the amount of sulphur in the brain is nearly the same as the amount of phosphorus. Thus, at one time, we have evidence of increased oxidation of the elements of the nervous structures, and at another time increased oxidation of the elements of the muscular structures; and we may thus conclude, that at one time the function of the nerves, and at another that of the muscles, is inordinately increased.

Successful Case of Ovariotomy. By John Beale, Esq. [Communicated by John Dalrymple, Esq., F.R.S.] The patient was a woman, aged 30, unmarried. The ovarian tumour was hard to the touch in the left iliac region and left hypochondrium, but soft and fluctuating on the opposite side, evidently in two distinct sacs, moveable, and not tender. It was removed on December 4, 1850, about a year after it was first perceived. The incision was ten inches in length, extending from the scrobiculus to the pubes. Two cysts were punctured, and their contents removed, before the tumour could be extracted; the pedicle was tied by a double ligature passed through its base, and the tumour was then separated as near as possible to it. The uterus and right ovary were healthy. Everything went on favourably; on the 15th Dec. she was able to walk about the room; and on the 25th, the ligature came away. The tumour was 3 ft. 2 in. in its largest cir-

cumference, and 2 ft. 1½ in. in its smallest; it weighed 25 pounds; it was multilocular, marked on the surface by bands of white fibrous tissue corresponding with the septa of the cysts. The cysts varied very much in size, and in the density and tenacity of their contents; in the smaller ones, the fluid was clearer and thinner. The average specific gravity was 1010, but the fluid contained a very large quantity of albumen. The total amount of fluid was from 21 to 23 pints.

Development of a large Cyst containing Hydatids at the Root of the Neck: Death from Rupture of the Left Subclavian Artery. By James Dixon, Esq. J. M., aged 24, a waterman, was admitted into St. Thomas's Hospital, January 14th, 1851. Nine years previously, a swelling had formed above the left clavicle, which slowly increased, producing occasional numbness in the left arm. At a later period, there was total cessation of the pulse at the left wrist. The swelling seemed to rise from about the situation of the first rib, having in front the sterno-mastoid muscle and the carotid sheath. The larynx was pushed a little to the right, and the voice had become hoarse and weak. No sign of aneurism or of heart-disease could be detected. A very indistinct fluctuation was felt about an inch above the top of the sternum, between the inner edge of the sterno-mastoid muscle and the common carotid artery, which lay on the median plane. A drachm of clear colourless fluid was evacuated from this spot by pushing in a trocar. Some weeks later, an incision was made in the line between the sternal and clavicular portions of the sterno-mastoid, commencing an inch above the sternum. A fascia-like membrane was exposed beneath the muscles; a trocar was passed in, and let out a few drops of colourless fluid. The opening was then enlarged towards the angle of the jaw, and a small collapsed hydatid escaped. The sac was large, and crowded with hydatids of various sizes. The wound was enlarged upwards; a small amount of arterial hæmorrhage occurred, which was arrested by pressure. The pulsation in the left radial artery was felt after the operation. Hydatids, some whole (one being of the size of a hen's egg), and others in fragments, were discharged through the wound, which was kept open. The patient went on well, the discharge of hydatids having ceased for some days, until the 27th, when profuse bleeding suddenly occurred from the wound. Pressure was applied, and a bladder of ice laid on the part. A second jet of blood took place fourteen hours after the first; a large hydatid, with a broad strip of sloughy fascia-like membrane, having been in the meantime voided. On the 28th, bleeding came on again; and the patient died on the morning of the 29th.

The sac in which the hydatids had been developed was of a fascia-like texture, and lined with shreds of sloughy fibrin. It reached, vertically, from the left side of the third cervical vertebra to the convexity of the aortic arch and apex of the left lung; and sideways from the middle line of the vertebral column to the scaleni muscles. Nearly the left half of the bodies of the fifth, sixth, and seventh cervical vertebræ, and of the second dorsal, had been absorbed; as also the head and neck of the first and second ribs. On examining the interior of the sac, the left subclavian artery was laid bare at about three-quarters of an inch from its origin, and presented a rent in its coat rather more than half an inch in length. The pressure between the hydatid sac and the border of the first rib had totally obliterated the calibre of the vessel for about half an inch; external to the scaleni it regained its proper dimensions. The left lung was healthy; there were slight traces of recent pleuritis. A single collapsed hydatid remained in the sac. Those which, during the progress of the case, had escaped entire, were carefully examined with the microscope. In several of the size of pigeon's eggs, clusters of echinococci were found in various stages of development; but neither in the largest, which was equal in bulk to a hen's egg, nor in those about the size of peas, could any of these bodies be discovered.

STATISTICAL REPORT ON DISEASE OF THE HEART, DERIVED FROM A CONSIDERATION OF ALL THE CASES ADMITTED INTO ST. GEORGE'S HOSPITAL DURING THE LAST TWO AND A HALF YEARS. By DR. BARCLAY. Rheumatism was first considered as one of its causes. Divided into two nearly equal classes—those really inflammatory or acute, and those less so, or sub-acute—the former class was found to contain sixty-seven cases with cardiac lesion, sixty-four without, and twenty-one doubtful. Endocardial murmur was found not to be certain evidence of disease, even in the most acute cases. Females were slightly more liable to acute rheumatism than males, but less liable to a recurrence of the disease. Females were more decidedly liable in a larger proportion to cardiac complication, and this was especially proved by the existence of friction-sound in the proportion of three females to two males. Cardiac complication existed eighteen or twenty per cent. more frequently in subsequent attacks than in primary ones. It was in the proportion of three to two of all the cases up to the age of twenty-five, and fell very rapidly after that age. The cases of sub-acute and chronic rheumatism furnished no examples of recent inflammation of the heart, but a considerable number of cases of old disease. So far as could be ascertained, these were almost all traceable to previous acute attacks, and were only about one-third of the cases which had previously suffered from acute rheumatism. The post-mortem appearances of recent inflammation were found associated with acute rheumatism, with disease of the kidney, with inflammation of the peritoneum and pleura, and with old disease of the heart, especially when hypertrophy existed, and with turbulent action during life. The cases of old disease of the heart were divided into sixty-one rheumatic, seventy non-rheumatic, and sixty-nine doubtful. They showed a very considerable preponderance of males, especially among fatal cases. Up to the age of twenty, almost the whole, and even as far as thirty, more than half the cases, were associated with acute rheumatism. In the next twenty years, the non-rheumatic almost doubled the rheumatic cases, and after fifty, there were scarcely any derivable from rheumatism at all. The duration of rheumatic cases, dating from the first attack of acute rheumatism to death, was generally much longer for females than for males, varying in the latter from four to six years; in the former, from twelve to sixteen years. Four out of seven fatal cases of acute rheumatism, and twelve out of eighteen of older standing, were associated with pericarditis, which was always severe and extensive; but universal adhesion was neither the constant nor even the common result of rheumatic pericarditis, and it existed in cases where the previous existence of rheumatism was altogether denied. In valvular disease there were eighteen rheumatic cases, twenty-three non-rheumatic, and twelve doubtful. The recent cases were all examples of inflammation of the mitral valve. When old and recent disease existed together, and when old disease was seen in different stages, the mitral valve generally appeared to have been first attacked, and the aortic secondarily; and hence the preponderance of double valvular lesion in rheumatic cases, seemed to be due to renewed inflammations at distinct periods. Inflammatory thickening occurred also in several cases in which there had been no rheumatism. Disease of the kidney was associated with two cases of simple recent fibrinous deposit on the valves, and three of recent pericarditis, in which no other cause was known to have been in operation. It seemed questionable how far this could be taken as a cause of great thickening of the valves, or of an adherent pericardium. Disease of each set of valves seemed to produce, in nearly equal proportions, hypertrophy and dilatation, but aortic regurgitation especially the latter; atheroma of the aorta, more commonly hypertrophy; adhesion of the pericardium, chiefly dilatation. Disease of the kidney was associated with an immense majority of the cases of hypertrophy, and similarly of all the cases of disease of the kidney; more than a third presented on post-mortem examination more or less of hypertrophy of the heart. A table was appended, in which

the post-mortem appearances were arranged, of all the cases in which the clinical history threw any light on the lesion of the heart found after death.

Case of Epilepsy treated by Tracheotomy. By W. H. Cane, Esq. [Communicated, with Observations, by Marshall Hall, M.D., F.R.S.] Dr. Marshall Hall had suggested on several occasions, and especially in a conversation with Mr. Cane, that as the attack of epileptic or other *convulsion* implied closure of the larynx, with expiratory efforts, the attack of convulsive epilepsy would be prevented by tracheotomy. Mr. Cane was summoned, on Feb. 1, 1851, to the case of a boatman, aged 24, who had become subject to violent fits of epilepsy, one of which had just occurred in so extreme a form as to leave him in a state of deep apoplectic coma and asphyxia, inspiration being performed only "by seldom and short catches, whilst the veins of the head and neck were everywhere visible and greatly distended." This state had continued nineteen hours. "Feeling convinced," Mr. Cane observes, "that the patient must shortly expire, and that the root of the evil was in the closure of the larynx, I at once proceeded to open the trachea, a matter of no small difficulty, on account of the twisted state of the neck, the engorged state of the vessels, and the constant action of the muscles. The operation of tracheotomy was performed, and the tracheal tube is kept in the trachea to the present time. The relief to the patient was immediate; the air passed into the lungs, the state of spasm subsided, with the turgid condition of the head and neck, and the patient soon recovered his sensibility. This was not the only gratifying result: although the poor man had experienced his epileptic seizures in increasing violence during seven or eight years, and recently thrice a week, he had, on April 1st, during two months, had no return of them. More recent accounts of the patient, who is now in Staffordshire, confirmed the former report; the tube is still kept in the trachea, and the epileptic seizures have not recurred.

Case of Organized Polypus of the Heart. By Thomas Bell Elcock Fletcher, M.D., Physician to the General Hospital, Birmingham. The patient in whom this morbid appearance was found, was a female, thirty-four years old, admitted under the author's care, at the General Dispensary, in October 1842, with symptoms of heart-disease of some years' duration. She had had rheumatism when eight years old, and her health had since been always feeble. Examination of the chest showed that there was considerable enlargement of the heart, and its action was violent; its beat was audible at some distance from the patient. The first sound was prolonged, but of a sharp tone, and was heard most intensely at the level, and two inches to the left side, of the left nipple. There was dulness on percussion, and bronchial respiration at the base of the left lung anteriorly; elsewhere respiration was natural. The liver appeared to be enlarged. The patient was relieved by elaterium, in various combinations, and afterwards took steel and digitalis with advantage, and in a month was dismissed from her attendance at the dispensary. Early in December she relapsed, and died in the course of a few days. The sound of the heart for the last few days was audible at four yards' distance; her friends stated they could hear it in the room below. It appeared to the author to be superficial, inducing the belief that it depended upon the doubling of an adhesion of the pericardium. After death, fluid was found in the right pleura, and in each lung a patch of hæmorrhagic deposit. No adhesions of the pericardium existed. There was considerable dilatation of all the cavities of the heart, especially on the right side. The foramen ovale admitted the point of the little finger, and about half an inch below its orifice in the left auricle, there was attached, by a narrow pedicle, a polypus, two inches long and three in circumference, which projected through the mitral orifice into the left ventricle. This polypus appeared to be covered by a membrane continuous with the endocardium, and had a cavity in its centre, the size of a small nut, containing bloody serum.

Remarks on a Peculiar Appearance observed in the Gums of Consumptive Patients. By Theophilus Thompson, M.D., F.R.S. The author, after glancing at the risk of allowing the study of auscultation to supersede attention to general symptoms, referred to the discovery communicated to the Society by the late Dr. Burton, of a blue line at the edge of the gums, as indicative of the presence of lead, and thence derived an encouragement to the examination of this part of the system, when there is reason to suspect any poisoned or morbid condition of the blood. He then presented the results of his observations in reference to this inquiry in cases of consumption, and avowed his conviction of the frequent existence in phthisical subjects of a mark at the reflected edge of the gums, deeper in colour than the adjoining surface; in some patients a mere streak on a raised border, in others, a margin more than a line in breadth, of a vermilion tint, inclining to lake: the mark being most distinct around the lower incisors, but usually observable in both jaws, and often around the molar, but modified in its situation by the form of the mouth. The author had examined some hundred cases in the course of the investigation, and gave the analysis of 102, of whom he had full records. In forty of forty-eight women, the gingival margin was present; and in fifty-four phthisical men, although in a few the line was so faint as to be open to question, there was only one in whom it could be considered decidedly absent. He had reasons for suspecting that the same condition of the system which produces this state of the gums tends also to produce clubbing of the fingers; but he considered that the change in the extremity of the fingers rarely occured till some time after the streak is manifest in the gums. Of seventy-six patients, forty-five were found to have clubbed fingers; of these forty-five, only one had gums free from the characteristic margin; yet twenty of the seventy-six had marginated gums, but no expansion of the extremities of the fingers. The author discussed the effect of various modifying influences, such as hereditary tendency, catamenial disturbances, and habits as respects cleanliness, but could not connect the presence of the symptoms in question with any of these circumstances; but he was of opinion that causes which irritate the mucous membrane tend to accelerate and increase the manifestation of the margin. He suggested this as an explanation of the more frequent absence of the line in women than in men, and dwelt on its practical importance, as indicating, in such cases, the use of refrigerants, as preliminary to the introduction of tonic remedies. The author canvassed the question whether a similar line existed in any other disease; he allowed that M. Frederieq may be correct in the opinion that certain changes in the gums occur towards the close of various chronic diseases, but he had never yet observed the peculiar margin described in this communication, without detecting other indications of consumption, although frequently only incipient. As respects prognosis in phthisis, he proposed the general rule, that cases in which the streak is observed early, or is broad or deep-coloured, tend to proceed more rapidly than those in which it was absent or slight; whilst freedom from the streak, even in the third stage, afforded encouragement in treatment. In reference to diagnosis, the author believes,—1st. That the absence of the streak in men affected with inconclusive symptoms of phthisis, may incline us to a favourable interpretation of any such suspicious indications; but that in women, rather less weight is to be attributed to this negative sign. 2nd. That the presence of the sign in women is almost conclusive evidence of the presence of the tubercular element in the blood. The paper concludes with the remark, that the symptom therein described is one of many proofs that consumption is *not exclusively a local disease, but rather a constitutional condition*, requiring for its elucidation and treatment far more than an acquaintance, however exact, with the phenomena of auscultation.

SURGICAL SOCIETY OF IRELAND.

December 7, 1850.

Mr. Trant, in the Chair.

Case of Polypus Uteri. By Dr. Banon. Dr. Banon exhibited a polypus uteri, which he had just removed from a lady, aged 74, who had suffered severely from hæmorrhage. Dr. Banon and Mr. Carte removed the tumour, by passing a needle armed with a double ligature through its centre, and tying it on either side so as to strangulate the vessels, then removing the polypus by a blunt-pointed curved bistoury. Scarcely any hæmorrhage attended the operation ; and the patient was quite free from unpleasant symptoms on the fourteenth day.

Cancerous Tumour removed from the Orbit. By Dr. Jacob. Dr. Jacob exhibited a dissection of a tumour, lately removed from the orbit of a man in the City of Dublin Hospital. He had lost the eye many years ago, but suffered no pain until about a year since, when the contents of the orbit began to enlarge, and continued to increase. The tumour projected beyond the cavity so far, as to stretch the upper lid, which still covered it. Its surface was covered with a network of vessels, and was irregularly knobbed ; it bled slightly when pressed or handled, and felt hard and inelastic. He suffered severely from paroxysms of intolerable pain at night, requiring opiates for its alleviation. The tumour was easily removed. A bistoury was passed under the outer canthus for about an inch, and pushed through the skin, so as to allow the lids to be separated freely, after which the blade of a common scalpel was carried round the orbit between the bone and the tumour, and through the soft parts in the bottom, so as to extricate the entire mass as far as possible. The bleeding, at first considerable, nearly ceased in a short time, and the orbit was filled with lint. There was some oozing of blood the night of the operation, and so much the following day as to require the application of fresh dressings, the patient being at the same time much prostrated ; but he had since rallied.

The dissection of the tumour displayed the progress of malignant disease amongst parts of diverse character. The original structures partly retained their natural organisation in the midst of the diseased mass. The eyeball, shrunk to a mere button, as it usually is when the cornea has been destroyed and the humours of the eye allowed to escape, still appeared sound ; the sclerotic being white and fibrous, and the choroid being still visible ; the optic nerve, too, although shrunk and wasted, was distinct for half an inch. The muscles, however, were thickened and greatly enlarged. On one side lay a distinct hard tumour the size of a large hazel-nut, and on the other a softer, but still a firm one, evidently the lachrymal gland, four or five times its natural size. The disease was evidently carcinomatous or scirrhous, although in some parts apparently assuming somewhat the encephaloid character, and even yielding a creamy material on pressure. The small hard tumour was in part of nearly cartilaginous density, but the lachrymal gland was not much firmer than natural, although less granular. The appearances afforded little hope of escape from the extension of the specific disease ; but as scirrhus in this situation may arise in the conjunctival covering of the eye, and may therefore be superficial, the operation was called for ; and especially, as the poor man suffered dreadful torture from the pressure of the tumour and consequent stretching of the nerves. Dr. Jacob had seen so many tumours of the orbit of non-malignant nature, and so many recoveries after removals of very doubtful ones, that he considered himself justified in affording this man the chance which extirpation afforded; but it was only a chance.

Case of Poisoning by Chloroform. By Dr. Bagot. Dr. Bagot related the case of a young lady, to whom he had been called ten hours and a half after the administration of from a drachm and a half to two drachms of

chloroform, to allay neuralgic pains of the face. His first visit was made at half-past ten p.m. The symptoms under which she laboured were those of coma. She was lying on her left side, perfectly unconscious of all around her, her eyelids closed; on raising the lids, the eyeballs appeared much suffused, the pupils irregular, and scarcely acted upon by light. There was considerable congestion about her face, and her head felt hot; the surface of the body and legs was cold; the pulse was 90, thready, irregular, and intermittent. Up to seven o'clock, her friends had not found much difficulty in arousing her, although she soon relapsed into the same state. Since that hour it had been much more difficult to dispel the stupor, and it was only after many endeavours that Dr. Bagot was able to do so. When roused, however, she intelligently answered a question, but after some hesitation, as if endeavouring to collect her thoughts. She then almost immediately sunk into the same comatose state, having first said that she knew that she was dying. Two or three times during the day she had shown hysterical symptoms, crying when moved, and having the same thought of approaching dissolution before her mind. Her bowels (habitually confined) had not been moved for three days.

The treatment consisted in the admission of fresh air, strong carbonate of ammonia to her nose, an occasional sprinkle of cold water over the face, and stupes of hot water, containing an abundance of mustard, to the feet and legs. As soon as she could swallow, he gave her draughts of ether and aromatic spirits of ammonia; and in about two hours, when the urgent symptoms were relieved, and reaction had set in, she took some strong tea, by which she was much benefited. She also had a draught containing one drop of croton oil, which affected her bowels in seven hours. As she recovered from the effects of the chloroform, the neuralgic pains returned to her face with great violence.

Next morning, she informed Dr. Bagot that she had passed a wakeful night, and had suffered much from headache, which was confined to the right temple. This pain continuing through the day, he applied two leeches to her temple, which gave immediate relief; she was enabled for the first time to turn off her left side. She was much weakened by this illness, and fainted at her first attempt to sit up in bed, where she was obliged to remain some days.

December 21, 1850.

Dr. Jacob in the Chair.

On a Functional Affection of the Spine, liable to be mistaken for Organic Disease. By Henry Kennedy, A.B., M.R.I.A. The affection alluded to was essentially a disease of the young, being seen most frequently between twelve and twenty years of age. Dr. Kennedy had, however, met with it as early as nine years, and as late as twenty-five. He had only seen it in private practice, and it was more common amongst males than females, in the proportion of at least two to one. It consisted in a pain in the back, combined with weakness, and this was always referred to the lumbar region; at least he had never seen it higher up. This pain commenced gradually, and might or might not be attended with the feeling of weakness; and occasionally only the latter was complained of. On examining the spine, the patient was nearly always able to refer the suffering to a particular part; but Dr. Kennedy had seen cases where the feeling was more diffused. It was worthy of notice, that a rough examination of the part might be made—the spine might be twisted, or percussion strongly used, and yet the patient would not complain. When left to their own feelings, they invariably preferred the recumbent posture. Walking was much less irksome than sitting, and particularly when they had no support for the back. In addition to an ordinary chair, they would use a cushion, so that it might press on the spine where they complained; and even when reclining at full length, they often placed a cushion in the hollow of the back, so

as to cause direct pressure. Those whose business led them to stand and work at a desk, seemed pecularly liable to the affection.

Case 1. Mr. ——, a young gentleman of 18, whose employment was in an office in Dublin, where he spent six or seven hours a day, partly standing and partly sitting at a desk, began to suffer from pain in the small of the back. He was of small size, but of a highly developed nervous system, as was shown when he laboured under any common indisposition ; as, for instance, a cold. The pain in the back was trifling at first, though constant ; so that he was able to pursue his usual avocations for about four months ; when it became so distressing that he was compelled to confine himself to a sofa the greater portion of the day, and when he did sit up, he always used a cushion between his back and the chair. On examination, nothing wrong could be detected with the part of the spine of which he complained most ; which was about the third lumbar vertebra. It could be twisted, and otherwise roughly handled, without causing any inconvenience, but he could not sit without support beyond a few moments. When he had any inducement, he could go through an amount of exertion on his feet, which seemed totally incompatible with the other symptoms. His general health appeared good ; his tongue clean ; his appetite not impaired. He continued in this state for four months, during which time he was seen by the late Mr. Carmichael, and a variety of treatment was adopted. In two months more he had recovered so far as to be able to resume his business, and at a still later period recovered completely ; nor had he since, though some years had passed, suffered from the same affection.

Case 2. A brother of the last patient, at the age of 21, began to suffer from pain in the back, attended by a feeling of weakness. He was also in an office where both standing and sitting at a desk was necessary ; but it was in a country town. At first it was merely an inconvenience ; by degrees, however, it became worse, so that he could scarcely go through his duties, and finally he came to Dublin for advice. He was seen by Mr. Cusack and Dr. Kennedy, and the symptoms were exactly those detailed in the last case, but not so severe. In this instance there were some signs of dyspepsia. After a certain period, not so long as in the former instance, this patient also got well, and had remained free of any suffering from his back, a period of five years having elapsed.

With regard to the *nature* of this affection, Dr. Kennedy was inclined to say—though it be anything but proved—that it arose from causes incident to the period of life at which it occured, conjoined with some obscure derangement of the general health. But this was but conjecture.

The *diagnosis* was of some moment ; for the symptoms might lead one to dread the existence of serious disease ; or it might be confounded with an organic disease. A young lady, while abroad, got the affection. She was advised to keep the recumbent posture, and to have issues put in. This advice was persevered in for some months, when she was brought home, and seen by Sir Philip Crampton, who at once ordered the issues to be dried, and the patient to get up, and go about. This was done, and the lady recovered, though slowly ; for her general health had been injured by her long confinement. The diagnosis would, probably, turn on the presence or absence of constitutional symptoms ; such as a quick pulse, night sweats, etc. In addition, even a rough examination of the spine did not cause any pain to the patient—a marked contrast between the two cases ; and lastly, the situation afforded some assistance ; for in the one affection it was, as far as Dr. Kennedy had seen, always in the lumbar region, and sometimes even at one side of the vertebral column ; while in the other, organic disease was not probably so common here as higher up.

The *prognosis* is favourable. The patient will get well ; but his recovery will occupy some time. Dr. Kennedy had seen no instance where the affection was completely got rid of under six months ; and in some of the cases it was much longer. It sometimes returned after the patient had been well for

months. To say that no case could run into more serious disease, would be going farther than prudence would justify; for in truth this affection, when well-marked, was sufficiently distressing. But Dr. Kennedy had not met any case of the sort. In one instance, indeed, a patient laboured under it when she was between eleven and twelve years of age. She recovered perfectly, but about two years subsequently was attacked with caries of the cervical vertebræ, which ultimately proved fatal by the disease extending to the membranes of the brain. With this exception—and it was not a case exactly in point—he had known no fatal results in connexion with that form of spinal affection under notice.

On the subject of treatment, Dr. Kennedy had nothing very definite to offer. A considerable variety of means had been used, both local and constitutional. The former included local bleedings, dry cupping, blisters, frictions, the cold douche, and galvanism; and the latter, aperients, tonics, change of air, and relaxation from business. Of these two, the latter had in his experience proved by much the most useful. He had also seen benefit follow the application of small and repeated blisters, as also the use of a weak stream of galvanism, applied daily, or every second day, according to circumstances. The patient, too, often got great relief from wearing a stiff belt. Still the general measures were the more important. In all the severer cases, the patient must give up his business for a time; two to three months complete relaxation must be enjoined, and if the patient could change his air, so much the better. Exercise, more or less, according to circumstances, should be advised to be taken daily; not, of course, to be carried to fatigue: at the same time that the patient, while at rest, might with advantage assume the horizontal position, propped up or supported in the way most agreeable to him. Strict confinement would generally do much more harm than good. Besides relaxation from business, and change of air, the cold douche, frictions, etc., were worthy of trial. As to medicines, Dr. Kennedy had tried a number, more particularly those of the tonic class; excepting strychnine, however, from which in some cases benefit had arisen, they appeared to produce little or no effect.

Effects of Rupture of the Cicatrix of a Burn. By Dr. Bagot. Some time since, a woman brought to him a little boy, about nine years old, who had got his arm contracted by cicatrix after a burn. He (Dr. Bagot) advised the woman to take the child to an hospital. A day or two after, the boy was running along the street, when he fell. In falling, the hand was caught by some obstacle, and the cicatrix was suddenly torn. This injury was followed by a great effusion of blood. The wound was again allowed to heal without the intervention of medical aid; the cicatrix following that wound never contracted in the slightest degree, and the boy has now the perfect use of his arm.

Case of Abscess in the Anterior Wall of the Uterus. By Dr. Moss. About seven months since, Dr. Moss was sent for to see a lady, who was suddenly taken with severe cramps in the abdomen and difficulty in passing water, weak pulse, and general febrile symptoms. He directed an enema to be given speedily, with anodyne draughts afterwards, unless there was speedy relief. In the morning, he found that, though considerable relief was given, it had not been complete. He then made a vaginal examination; and, on introducing the finger, he found a tumour pressing downwards, which had dragged down the posterior part of the bladder He then got the assistance of Dr. Johnson, who found his (Dr. Moss's) diagnosis correct. He feared it was a fibrous tumour, and determined, if possible, to force the tumour back again. He did so, and it left the passage clear, and the os resumed its proper position. From that time, however, up to last week, the patient had suffered a variety of pains, all in the same region. The bowels, however, had been kept regular. Last week he was sent for suddenly to go and see the lady again. She informed him, that she had passed half a wineglassful of what,

on inspection, seemed to be healthy-looking pus, from the vagina. He found part of the tumour still existing, but softer. On using the speculum, he found the pus coming directly from the os, so that he presumed there was an abscess of an indolent character forming for some time. The patient had had considerable relief; but he rather feared the tumour was again filling, though he hoped he would be able, by making an opening, to give permanent relief.

January 11, 1851.

Dr. Beatty, and afterwards Dr. Jacob, in the Chair.

Remarkable Specimen of Colloid Degeneration springing from the Forearm. By the Secretary. Case. T. D., aged 65, was admitted into the Athy Infirmary on the 19th of December, 1850, for dysentery. He had a large tumour on his forearm of (he said) six months' growth, which never gave him pain, but, from its magnitude, caused great inconvenience. He was treated for the bowel complaint with the usual remedies, but died on the 30th of December, eleven days from his admission.

Inspection of the Body, twenty-four hours after death. The spleen and kidneys were enlarged, the latter to three times their normal size; the former weighed about three pounds. On cutting into them, they presented well-marked cerebriform matter. The liver was enlarged, but did not present any such appearance. The intestines were much congested throughout; the large intestines had ulcers in different parts, and one very large one near the head of the colon. He had never manifested any symptoms of disease of the brain or chest: the examination was therefore confined to the abdomen. The tumour occupied the anterior aspect of the forearm, extending from the bend of the elbow to the base of the metacarpal bone of the thumb, measuring in its longitudinal direction 19 inches, and in its circumference 33 inches. It weighed 25lbs. 8oz. The integument covering it was of a dusky yellow colour, traversed by numerous large and tortuous veins. It was uneven on its surface, and on its most prominent parts gave an elastic fluctuating sensation, as of a fluid in a dense cyst, much more distinct in some points than in others. The muscles of the forearm (particularly those arising from the internal condyle) were of a yellowish colour, much atrophied, and spread out in a ribbon-like manner over the surface of the tumour; their tendons formed grooves in its surface. The fingers were permanently flexed on the palm; the interspaces between the tendons forming the elastic fluctuating prominences alluded to above. The subcutaneous cellular tissue had in some places been absorbed, the true skin being intimately connected to the walls of the tumour. The arteries of the forearm, which had been previously injected, appeared to have resisted the disease. The nervous trunks generally were enlarged in size, especially the median, which was stretched and flattened in its course over the surface of the tumour. The sac was found to consist of a thick gelatinous wall, very rugged on its inner surface, from masses of the jelly-form substance protruding inwards; it was filled to distension by a dark brownish fluid, very like liquid glue or thin treacle. The disease appeared to have originated in the radius, as the central portion of the shaft of this bone was completely removed; but the rough and spiculated ends of its upper and lower extremities projected into the cyst, whilst the ulna, though flattened and slightly bent, was sound throughout. The elbow and wrist were quite free.

Microscopic Examination. A thin section of the morbid structure presented a fibrous stroma, the interspaces or loculi of which contained congregated cells of different shapes, some caudate, others fusiform, but most of them oval or round, with nuclei. Acetic acid rendered the fibrous stroma somewhat more distinct, but decidedly brought more clearly into view the nuclei and nucleoli of the cells. Some compound granular cells and fat granules were scattered in small groups, amidst a great quantity of granules and molecules. The colloid fluid presented numerous very delicate cells,

rendered transparent on the addition of acetic acid, thus exposing their nuclei; but no fibrous arrangement (though diligently sought for) was detected in this fluid part; it contained naked nuclei, and some oil-globules, with an abundance of molecular matter. The blood from the cephalic vein, microscopically examined, appeared of a glutinous nature, by which was meant a decided tendency to form tags or tails as the corpuscles glided between the glasses.

Case of Simulated Neuralgia from a common Pin, which had been swallowed, and in eight months after emerged from the surface of the body. By H. C. Field, M.D. After some remarks on the cases in which pins have been said to have been swallowed, or thrust into parts of the body, Dr. Field related the following case.

Case. Mary M., a healthy woman, aged 30, in July 1842, came to the Stillorgan Dispensary. She said her mouth had been full of pins: that she had accidentally swallowed one, which was choking. Dr. Field immediately relieved her by using a probang. In the following October, he was requested to visit her as a dispensary patient; she then told him that she was in the greatest agony in her hip-joint, extending down the limb on the same side. He immediately bled her largely from the arm, had her cupped over the seat of pain, and gave her two grains of opium. The next day, she had had some short sleep, but the pain was still very great. After exhausting every means he could think of, narcotising, mercurialising, blistering, and tonics, Dr. Field at length advised her to try an hospital. After submitting to various remedies in Steevens' Hospital, without more than temporary relief, she was advised to go into the country for change of air, being greatly emaciated. She came again, dreadfully reduced in flesh, to the country, where Dr. Field saw her, but did nothing for her; and after remaining some time at home, suffering still from what appeared to be severe neuralgia, and being much reduced, she one day felt a sudden remission of the pain, and three days after it left her. From this time she rapidly recovered her health and strength, and was soon able to leave her bed. Shortly after, she found what she called a sore pimple on the inside of her thigh, which she poulticed and plastered, but could not cure; and having quite regained her strength, after an illness of *eight months*, she walked to the dispensary. On examining the pimple, Dr. Field found in its centre a sharp point; and after a little, he extracted, by its point, a large pin. Dr. Field thought that the simulation of idiopathic disease, for so long a time by a foreign body, rendered it extremely interesting, and established the *possibility* of a common pin, after being swallowed, emerging from the surface of the body.

MISCELLANEOUS INTELLIGENCE.

Dinner at St. Bartholomew's Hospital. During last month, the President, Treasurer, and Governors, gave their Annual Dinner in the hall of the Hospital. Upwards of two hundred gentlemen were present, comprising the Almoners, many of the Governors, and Medical Officers. General Sir George Pollock honoured the governors with his presence. There were also as guests many of the distinguished foreign physicians and surgeons now on a visit to London; among whom may be mentioned Dr. Warren of Boston, U. S., Dr. Pantaleoni of Rome, Professor Jaëger of Vienna, Dr. Donders of Utrecht, and Dr. Hannover of Copenhagen.

Physiological Society of Edinburgh. A new society with this name was instituted at Edinburgh, on the 4th of June: "having for its object the investigation of the structure and functions of all organized beings, in their healthy and diseased conditions." The following gentlemen were appointed office-bearers: — President, Professor Hughes Bennett; Vice-Presidents, Mr. Zaglas and Mr. J. S. Sanderson: Secretaries, Dr. W. T.

Gairdner, and Mr. John Barlow. A society called "the Anatomical and Physiological Society" formerly existed in Edinburgh ; but was at last absorbed by the Medico-Chirurgical.

Insurance Offices and the Medical Profession. The *Medical Times* publishes the following as a correct list of the companies who do not demean themselves by seeking gratuitous advice. The fee paid by the New Equitable is *two guineas*. We believe that the great success of this and other new companies is mainly due to the energetic support which they are receiving from medical men. The older societies however are now reaping the advantage of following the good example of their youthful rivals. The subjoined list embraces most of the trustworthy insurance companies in England.

Architects—69, Lombard-street, London.
Britannia—1, Princes-street, Bank, London.
British Mutual—17, New Bridge-street, Blackfriars.
Church of England—Lothbury.
Commercial—112, Cheapside, London.
East of Scotland—1, Bank-street, Dundee.
East of England Mutual—Cheapside.
Engineers', Masonic, and Universal—345, Strand.
English and Scottish Law—12, Waterloo-place, London.
English Widows' Fund—67, Fleet-street.
European Life Insurance and Annuity Company—10, Chatham-place, Blackfriars.
General and Mining—4, Bridge-street, Blackfriars.
General Benefit—4, Farringdon-street.
Great Britain—Waterloo-place, and King William-street.
Indian and London—King William-street, and 14, Waterloo-place.
Industrial and General—2, Waterloo-place, Pall-Mall.
Kent Mutual—High-street, Rochester.
Kent Mutual Life Assurance Society—6, Old Jewry, London.
Leeds and Yorkshire—Commercial-buildings, Leeds
Legal and Commercial—73, Cheapside.
London Indisputable—31, Lombard-street.
London Mutual Life—63, Moorgate-street, City.
London and Provincial—39, Nicholas-lane.
Medical, Legal, and General—126, Strand.
Medical, Invalid, and General—25, Pall-Mall.
Mentor—2, Old Broad-street.
Metropolitan and General—27, Regent-street, Waterloo-place
Mitre—23, Pall-Mall.
National Loan Fund and Life Assurance—26, Cornhill.
National Mercantile—Poultry, Mansion-house.
New Equitable Assurance Company—450, West Strand.
North of England—11, Cheapside, London ; and Old Haymarket, Sheffield.
Northern Assurance—1, Moorgate-street.
Norwich Union—Crescent, New Bridge-street.
Professional—76, Cheapside.
Prudential—14, Chatham-place.
Royal—Royal Insurance-buildings, Liverpool.
Royal Exchange—Royal Exchange.
Royal Farmers' and General—346, Strand.
Scottish Equitable—26, St. Andrew's-square, Edinburgh.
Solicitors' and General—57, Chancery-lane.
Sovereign, 5, St. James's-street.
Star, 44, Moorgate-street.
Westminster and General—27, King-street, Covent-garden.
Yorkshire—York.

Hospital Villages of Iron.—Dr. Simpson, of Edinburgh, in concluding one of his interesting Reports of the Maternity Hospital of that city, makes some important remarks on the evils of crowding the sick in hospitals, and suggests the construction of cottages or villages of iron, as a substitute for our "Hospital Palaces". We quote the passage entire.

"The convalescence of the hospital patients was often interrupted by febrile and inflammatory attacks. The house, No. 3, St. John-street, used as a hospital, was, in addition to a sunk kitchen flat, three stories in height, with two rooms in the first and second flats, and three in the third; and it was much too small for the accommodation of the patients, and of the resident house-surgeons, matron, etc. The rooms themselves were low-roofed, and very imperfectly ventilated. Various plans were attempted to improve the ventilation, but not with much success. Whenever the hospital became in any degree crowded, fevers (or weeds), with more or less abdominal tenderness, appeared among the patients; and frequently the supervention of such attacks during convalescence became so common, as to constitute the rule rather than the exception to it. Every one acquainted with hospital practice, whether obstetric, surgical, or medical, is well aware of the great liability among the patients to febrile and inflammatory attacks whenever the wards are overcrowded; and in no practice is this more visible than in midwifery. Indeed, I believe, there are few or no circumstances which would contribute more to save surgical and obstetric patients from phlebitic and other analogous disorders, than a total change in the present system of hospital practice. I have often stated and taught, that if our present medical, surgical, and obstetric hospitals were changed from being crowded palaces, with a layer of sick at each flat, into villages or cottages, with one, or at most two, patients in each room, a great saving of human life would be effected. And if the village were constructed of iron (as is sometimes now done for other purposes), instead of brick or stone, it could be taken down and rebuilt every few years; a matter apparently of much moment in hospital hygiene. Besides, the value of the material would not greatly deteriorate from use; the principal outlay would be in the first cost of it. It could be erected in any vacant space or spaces of ground, within or around a city, that chanced to be unoccupied; and, in cases of epidemics, the accommodation could always be at once and readily increased."

The Best Field for Surgical Observation. Dr. Moses Buchanan stated in 1844 (Introductory Lecture: Glasgow, 1844), that the Glasgow Royal Infirmary was the best surgical school in the world. "It will be found," he said, "to present at all times the most important gallery of acute surgical disease of any in the world." The same claim was reiterated by Dr. Easton in his Introductory Lecture, delivered on the 29th November, 1849 (and reviewed by us in our volume for 1850, p. 144). It appears, however, that the Glasgow lecturers, who had up to this date, held unchallenged the surgical supremacy of the world, are no longer to be allowed to do so. Mr. Syme, of Edinburgh, after a ten days' absence, thus addressed his class: "Gentlemen, I regret my absence for the last ten days, but I hope that the information acquired since I saw you, will conduce to the object we all have in view. I have long suspected, and am now fully satisfied, that neither Paris nor London possesses any hospital which affords so good a field for surgical observation as the Royal Infirmary of Edinburgh. The knowledge of this fact should stimulate your exertions, and prevent them from being relaxed through the vain expectation of elsewhere finding a better opportunity for practical study, while it greatly encourages me to cultivate with redoubled energy the valuable means of instruction placed within my reach." *Edinburgh Monthly Journal*, July 1851, pp. 53, 54.

Sir B. C. Brodie, Baronet, had the honorary degree of D.C.L. conferred upon him on the 3rd July, by the University of Oxford.

College of Physicians.—A Conversazione was given by the President and Fellows on Saturday, June 28, at the College, Pall-Mall East. The visitors were received by Dr. Paris, President of the College, in the Censors' room, and afterwards passed into the Library, upon the tables of which were rare books and ingenious philosophical instruments. Among the company were the Bishops of Manchester, St. Asaph, Chester, and Oxford; the Earl of Harrowby; the Earl of Rosse; Lord de Mauley; Lord Colborne; the Lord Chief-Baron; Mr. Baron Parke; Mr. Justice Coleridge; the Vice-Chancellor; M. Majendie; Professor Otto; Baron Dunckink Holmfeld; Moonshee Syed Abdoollah; Senor Don Joaquin Alfonso; Professors Daubeny, Graham, Wheatstone, Owen; Sir D. Brewster; Sir C. Fellows; Sir J. South; Sir H. Ellis; Sir H. De la Beche; Sir A. Knight, M.D.; Sir W. Newton; Sir C. Clarke, M.D.; Archdeacons Hale, Sinclair, Robinson, and Brooks; Rev. Dr. Major; Dr. R. Bright; Dr. C. Locock; Dr. R. Ferguson; Dr. Marshall Hall, etc. Refreshments upon the most liberal scale were provided. The company broke up shortly after eleven. Another conversazione will take place before the close of the season.

Pharmacy Bill. Mr. Jacob Bell of Oxford-street, recently introduced a measure into Parliament for the purpose of elevating the druggists into the rank of professional men. It was read *pro forma* a second time in the House of Commons; and was then delayed till next Session. The measure is not likely to be supported by the medical profession. As St. Alban's, the burgh for which Mr. Bell sits, may be disfranchised (for the abominable way in which the electors took bribes at the last election); and as a general election is soon expected, the bill is likely to require another guardian.

Provincial Medical and Surgical Association. The Nineteenth Anniversary Meeting of the Provincial Medical and Surgical Association will be held at Brighton, on Wednesday the 13th, and Thursday the 14th of August next. Dr. G. S. Jenks is the president elect, and the address on Surgery will be delivered by Mr. Benjamin Vallance of Brighton; that on Medicine by Dr. William King. Dr. Mantell will lecture on the Medical Topography of Sussex, with copious illustrations. The meeting is expected to be one of unusual interest and importance; and many of the élite of the profession in London are expected to attend.

New Lunatic Asylum at Colney Hatch. This new asylum for the county of Middlesex was opened on the 1st July. It is the largest asylum in Europe. The galleries have octagon ends, pierced with windows in accordance with Dr. Conolly's suggestion, in order that the patients when walking in them may escape the dreary aspect of a dead wall.

Testimonial to Dr. Laycock, of York. A handsome silver tea-service has been presented to Dr. Thomas Laycock, of York, by the Associated Licentiates Extra Urbem of the College of Physicians, with the following inscription: "Presented to Thomas Laycock, M.D., Physician to the York Dispensary, Lecturer on the Practice of Medicine in the York Medical School, etc., by his friends, the Associated Licentiates Extra Urbem of the Royal College of Physicians of London, in testimony of their very cordial esteem and regard, and in gratitude for the ability, energy, and zeal with which he has maintained their rights and interests.—Anno Domini, 1851."

APPOINTMENTS.

Hawkins, Cæsar H., Esq., Surgeon to St. George's Hospital, elected, on the 10th July (by the Council), one of the Vice-Presidents of the Royal College of Surgeons of England for the ensuing year.

Jones, Wharton, Esq., F.R.S., was recently elected to fill the triennial appointment of Professor of Physiology to the Royal Institution, vacant by the retirement of Dr. Gull, at the termination of his term of office.

Luke, James, Esq., Surgeon to the London Hospital, elected, on the 10th July (by the Council), one of the Vice-Presidents of the Royal College of Surgeons of England for the ensuing year.

South, John F., Esq., elected, on the 10th July (by the Council), President of the Royal College of Surgeons of England, in the room of Mr. Arnott, whose period of office has expired.

OBITUARY.

Emslie, Alex. L., Esq., Surgeon R.N., at Auchtermuchty, N.B., on the 9th July.

Gilbertson, Frederick, Esq., at his residence, Egham, Surrey, on the 2nd July.

Gibbes, Sir George Smith, M.D., F.R.S., at Sidmouth, on the 23rd June, aged 80. He was for many years Physician Extraordinary to Queen Charlotte; and for a lengthened period practised his profession at Bath.

James, C. H., Esq., late of the 39th Regiment, at Glasgow, on the 11th July.

Jenner, Dr. Henry, third son of the late Rev. H. Jenner, of Burbage, Wilts, and nephew of Dr. Edward Jenner, the discoverer of vaccination, at Stone, near Berkeley, on the 3rd July, of paralysis, aged 80.

Moir, D. M., Esq., Surgeon, of Musselburgh near Edinburgh, at Dumfries, of peritonitis, on the 6th July, aged 53. Mr. Moir was extensively employed in medical, surgical, and obstetric practice among a distinguished class of patients; and by his professional brethren, as well as by the public, he was deservedly held in very high estimation. His medical publications are possessed of much merit; but, we believe, are only two in number: viz., 1. *Outlines of the Ancient History of Medicine.* 12mo. Edinburgh: 1831. 2. *Practical Observations on Malignant Cholera.* 8vo. *Pamphlet.* Edinburgh: 1831. Notwithstanding the great amount and fatiguing nature of his professional duties, Mr. Moir was able, by the exercise of method, to obtain occasional hours of relaxation and leisure, many of which he devoted to literary pursuits. From 1819, to the close of his career, he was a contributor to *Blackwood's Magazine;* and his poetry, published in that miscellany with the signature of "Delta", has long since placed its author in the highest rank of British bards, and given him an European reputation. His *Mansie Waugh, the Dalkeith Tailor*, is a prose novel of singular power, and full of the richest humour; and it would have given Mr. Moir an enduring literary fame, though he had never written a verse. But it is for the sweetness, the deep pathos, and the heart-improving influence of his domestic poetry, that his name will be chiefly remembered and cherished, so long as British literature endures. No one, who is not dead to every generous impulse, can read without emotion his little volume entitled *Domestic Verses:* and we trust that there are few lovers, husbands, wives, or parents, who can peruse them, without being, not only moved to tenderness, but melted to real amendment of heart. Jeffrey well said, that "these poems are so tender and true, so sweet and natural, as to make all lower recommendations indifferent."

Pope, Edward, Esq. (in practice prior to 1815), of 1, Princes-street, Stamford-street, at his residence, on the 17th July, aged 57.

Ripley, John, Esq., Surgeon, at his residence, Whitby, Yorkshire, on the 10th July, aged 54.

Teevan, William, Esq., Surgeon, of Bryanston-square, London, on the 6th July, aged 49. He died at Treplitz in Bohemia, whither he had gone for the restoration of his health.

Wilson, Dr. James A., son of the late John Wilson, Esq., Dumfermline, N.B., at Old Calabar, Africa, in the 22nd year of his age.

BOOKS RECEIVED.

Badeley on Mind, Matter, and Insanity. London: 1851. Beale (Lionel John). Laws of Health. London: 1851. Bushnan (C. Stevenson). Miss Martineau and her Master. London: 1851. Chevers on Diseases of the Heart. Calcutta: 1851. Digitaline: Rapports de MM. Rayer, Souliaran, et Bouillaud. Paris: 1851. Gairdner (William) on Gout. London: 1851. Galloway (Robert). First Steps in Chemistry. London: 1851. Jones (T. W.) on the Sense of Vision. London: 1851. Lardner (Dionysius). Hand-Book of Natural Philosophy and Astronomy. *First Course.* London: 1851. Medical Man's Plea for a Winter Garden in the Crystal Palace. London: 1851. Squires New London Pharmacopœia translated, etc. London: 1851. Symonds (John Addington) on Sleep and Dreams. London and Bristol: 1851.

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ORIGINAL COMMUNICATIONS.

ILLUSTRATIONS OF THE DIFFICULTIES WHICH BESET THE DIAGNOSIS OF SOME CASES OF DISEASE.

By THOMAS POYSER, Esq., F.R.C.S.Eng.

(*Continued from p. 733 of Volume for* 1850.)

I PUBLISHED in the LONDON JOURNAL OF MEDICINE, for August 1850, some observations under the above title; and the following remarks are offered in farther elucidation of the same subject.

It has appeared to me that (in the country at least) we pay less attention to diagnosis, than to therapeutics. We are too apt to prescribe before the disease has fully developed itself; or before we know its precise nature, or the organ affected. Do we not sometimes, by a too precipitate recourse to potent medicines, interfere with the remedial efforts of nature, and not only aggravate the malady, but render its cause more obscure? The French adopt an opposite error: they more carefully investigate the cause and seat of the ailment, and then, by removing the obstacles to recovery, leave nature to perform the cure. In acute diseases, very lamentable consequences sometimes result from this timid system of therapeutics; whereas, if this "expectant method" be cautiously followed in suitable cases, much good results. Energetic remedial measures are judicious, and imperatively demanded, when the disease is acute, and its nature manifest: but, in doubtful cases, it is much safer to wait, than hastily to adopt active treatment, which may be as potent for evil as for good.

The cases subjoined may not possess much practical importance; yet, as illustrating some points of diagnosis, they may not be without some value to practitioners.

CASE II. OSSIFICATION OF THE AORTIC SEMILUNAR VALVES, WITH FATTY DEGENERATION OF THE HEART. R. H., Esq. This gentleman in early life suffered much from spasmodic asthma; but as he grew up, this disease wore off. When he was about fifty, he became subject to gout; and occasionally passed large uric acid calculi,

with severe pain, and generally a considerable discharge of blood. The hæmaturia would also sometimes recur, if he took violent exercise on horseback, or on foot, without the pain, or other symptoms of gravel. He suffered, however, much less from these affections for some years before his death; and, during the last three years of his life, he had no attack of either gout or gravel. He then became more lusty and bloated, and began to suffer from dyspnœa on walking up hill, and from occasional acute pain in the region of the bladder. He attributed the shortness of breathing to increased corpulence; and his own feelings led him to apprehend that the pain in the bladder arose from stone. The pulse was always feeble and quick; the impulse of the heart was also feeble, but the stethoscope did not indicate any other morbid condition of that organ. There was usually a puffy or œdematous swelling of the ankles and feet. These symptoms continued to increase, particularly the pain in the hypogastric region, which was occasionally so severe and long-continued, as to require large doses of opium to assuage it. For a few months before his death, Mr. H. suffered from occasional attacks of syncope; and less bodily or mental exertion brought on the paroxysms of dyspnœa. From the symptoms, as well as from stethoscopic examination, it then became evident that there was valvular disease of the heart. He was, however, never confined to the house, and followed his usual amusements and avocations to the moment of his death, which took place instantaneously, on Jan. 11th, 1851, while sitting in his library.

There existed a peculiarity in the case of Mr. R. H. which it is right to mention: viz. that if he took the smallest quantity of rice, he was immediately attacked with erythema, extending over the whole body, and accompanied with severe itching fever and swelling of the eyes, and generally continuing two or three days.

An autopsy was made thirty-six hours after death. The body was covered with a thick layer of fat. The heart was small. In the apex of the left ventricle, there was a small polypus. The aortic semilunar valves were completely ossified; and the aperture through them was so much diminished, as only to allow the end of the little finger to pass. The aorta itself was larger than usual, particularly about the arch. The coronary arteries had patches of ossific matter on them; and the muscular substance of the heart was pale, flabby, and loaded with fat. The lungs and abdominal viscera were healthy, and the bladder free from calculi, or any other morbid appearance.

Remarks. This case illustrates too truly the accuracy of Dr. Latham's remark, in the preface to his valuable *Lectures on Clinical Medicine;* that in certain diseases of the heart, "the same signs which notify their existence, declare their incurability". "What a gain," he adds, "will it be to mankind, should observation hereafter discover that the conversion of the valves of the heart, and the lining of arteries, into earthy matter or cartilage, has its sure pathological origin in certain forms of disease, in other parts or in the constitution at large, which are both obvious and curable; or in certain habits and modes of living, which can be rectified or avoided."

In this case, there can be but little doubt that when the peccant matter of the blood ceased to be eliminated from the system, through the agency of the attacks of gout or gravel, a deposit took place on

the aortic valves. It hence shows the importance of not neglecting "to rectify certain habits and modes of living", which may occasion these diseases, or by remedial measures to obviate the cause, even when the paroxysms have ceased to recur.

This case also confirms a point of diagnosis, first, I believe, adverted to by Mr. Allan Burns, in his *Treatise on the Diseases of the Heart:* that in certain affections of that organ, more especially chronic inflammation, acute pain in the hypogastric region is a common attendant, if not a pathognomic symptom. He relates some fatal cases, where the true seat of the disease was not suspected during life, the symptoms being attributed to disease of the bladder, and in one instance to disease of the uterus: yet dissection proved that these organs were quite healthy, and that the morbid condition of the heart was the sole cause of the symptoms, and of the fatal termination. In the case above narrated, the pain in the bladder was the only symptom which arrested the patient's attention, or for which he was anxious to obtain relief. As it occurred before there was any evidence of disease of the heart, and continued at intervals during the whole of its progress, I think it deserves attention, not only as a concomitant, but as a premonitory symptom, of these intractable maladies.

Case iii. Large Renal Calculi. John Brocklehurst, aged 40, the servant of a gentleman of this town, for three or four years before his death, suffered from dyspeptic symptoms, and occasional pain in the loins. He had no difficulty in micturition, nor did the urine exhibit any morbid appearance. Having tried various remedies without any relief, he was admitted into the Derbyshire Infirmary, and was several weeks under the care of the late Dr. Baker, who treated the case as one of dyspepsia. He was discharged from the infirmary without being relieved. He then consulted an irregular practitioner, who, regarding the case as one of lumbago, used heating and stimulating internal, as well as external remedies, which aggravated the symptoms. Subsequently he put himself again under my care. He was now sallow, emaciated, and the pain in the back had become more constant and severe. He had been taking the oil of turpentine and carbonate of soda in large doses. He made water freely, and without pain; but the urine was alkalescent. On examining carefully the seat of the pain, it was in the region of the kidneys, and was a little increased by pressure. At this advanced period of the disease, and from his emaciated state, the hard projecting kidneys were easily felt through the integuments. He took barley-water acidulated with muriatic acid, and opium, in such doses and at such intervals as the pain required. Under this treatment, he lived in a state of comparative comfort for about three weeks, when he sunk from exhaustion and debility.

Autopsy. Twenty-four hours after death, the body was examined Nearly the whole substance of each kidney was absorbed, and the space occupied by calculi of great magnitude. This mass of calculous matter was surrounded only by the fibrous tunic of the kidneys. One kidney contained four, the other three calculi, closely fitted together; and the whole had assumed the shape, and the ordinary size, of that organ. The calculi were composed of the earthy phosphates, confusedly cry-

stallised, and weighed altogether eight ounces and four drachms. The body was extremely emaciated, but free from any other disease.

Remarks. Many cases similar to this are on record; but I have selected it, as illustrative of the object I have in view, viz., to direct attention to a more careful diagnosis. It is not improbable, that if in the early stages of the disease, the urine had from time to time been tested, the further deposit of earthy matter might have been prevented by appropriate treatment, instead of being increased by magnesia and the other alkaline medicines, which were the remedies mainly had recourse to.

It is remarkable how large a portion of the glandular substance of the kidneys may be displaced by calculous matter, without impairing their functions, and sometimes also without occasioning much pain. In this case, till within a few weeks of the patient's death, the pain was not of a fixed character; nor did it disable him from following his usual occupation, till he was prevented doing so by exhaustion and debility.

In the Descriptive and Illustrated Catalogue of Calculi, in the Museum of the Royal College of Surgeons in London, there is an engraving of a large Calculus, of the shape and structure of those I have described. This calculus, now in the museum, weighs seven ounces and four drachms. In an original memorandum by Mr. Hunter, appended to it, it is stated, that "this calculus was taken from the pelvis of the right kidney of Mrs. ——, a natural daughter of Sir Richard Steele. She was never known to have a nephritic symptom till just before her death, when she was taken with a violent pain in her right side, near to the back, the seat of the right kidney, which appears to have thrown her into a fever, of which she died: and upon opening the body was found this stone, filling up an enlarged pelvis, and the substance of the kidney itself become so thin, as only to appear like a coat or membrane covering the stone, which gave the idea to the surgeon, that the substance of the kidney was grown into a stone."

Wirksworth, July 31, 1851.

REPORT OF A CASE OF ACUTE GLANDERS, FOLLOWED BY RECOVERY; WITH REMARKS.

By F. W. MACKENZIE, M.D.Lond., Fellow of University College; Physician to the Paddington Free Dispensary for the Diseases of Women and Children, etc.

It is unnecessary, at the present day, to adduce any additional facts or arguments to prove that Glanders is a disease which is communicable from the horse to the human species. This has been completely established by the researches of many accurate observers, and is, I believe, generally admitted by the profession at large. As, however, the recorded cases of its occurrence in man are not very numerous, from the fact, probably, that it is not readily communicated to the human race, and as consequently many points relating to the pathology of the disease are obscure, it is presumed that the report of an additional case will not be unacceptable to the profession. I therefore subjoin the particulars of one which has lately been under my care,

and have added some remarks, which have been suggested by a consideration of it.

Case. William Wilcox, a horsekeeper, aged 58, was admitted into the Paddington Infirmary, late in the evening of the 19th July. He was seen by me the following day, and appeared to be very dangerously ill. His face generally was swollen and suffused, but more especially in the submaxillary region. A large quantity of saliva was pouring from his mouth, his breath was extremely fetid and sickening, his gums were swollen, and his teeth loose,—some indeed were merely hanging from the gums. The tongue was much enlarged, and could not be protruded beyond the margin of the teeth, and it was forced upwards against the roof of the mouth by the swelling of the salivary glands below; the throat was constricted, and consequently both breathing and swallowing were difficult. His nostrils were filled with a thick glutinous secretion of an offensive odour, which was with difficulty dislodged. The patient had been very restless all night, had been constantly throwing his arms about, was alternately chilly and hot, and at times sweated profusely; he had a quick pulse, and was in a state of extreme prostration. Looking to the profuse salivation, the condition of the salivary glands, the extreme fetor of the breath, and the state of the gums and teeth, my first impression was that he had been severely salivated with mercury. It appeared, however, that he had not taken a particle of this medicine for some time, and his general symptoms were, moreover, inconsistent with this view. After a great deal of trouble, occasioned by the difficulty he had in articulating, the following history was obtained.

He had for some time past been in very destitute circumstances, in consequence of having been out of regular employment; his food had been scanty and bad, and he had been accustomed to sleep about in stables, or wherever he could get a shelter for the night. Under these circumstances, he accepted the charge of some glandered horses at Islington. He began attending to them on the 30th of June; and, at one time, had thirteen under his care, but some became so bad that they had to be sent to the knackers. In grooming them, the secretions from their mouths and nostrils were frequently blown upon his face, and the stench of the stable in which they were kept was very great. A week after he had been looking after them, he began to feel feverish and ill; his stomach in particular became disordered, and his appetite bad. He was now anxious to give up his employment, but his master pressed him to stay, and he remained for several days longer. He got progressively worse, the febrile symptoms increased, and his stomach became so much disordered that he could not retain any food; at times, he broke out into profuse cold sweats, but he had no rheumatic pains, nor had he as yet any local affection of the face, nose, or salivary glands.

On Sunday morning, July 13th, while cleaning the horses, he felt completely overpowered by the stench; and he became so ill, that he was obliged to leave the stable abruptly. He was now seized with severe headache and giddiness, and swelling of the face. Lachrymation and profuse salivation soon followed. He says that half a pint of fluid ran from his mouth in the course of an hour; his teeth became loose, and the gums painful and tumid. His tongue began to swell, his throat felt constricted, and his nostrils became filled with a thick

yellow, fetid, glutinous secretion. He had frequent rigors, succeeded by heats and cold sweats, and he felt very low and weak. He was now obliged to give up his work, and was advised to take some gin, which, together with beer, he drank from time to time, but his stomach was so irritable that very little would stay upon it. He left Islington, and came to the Iron-gate Wharf at Paddington, in the hope of getting better, but he still continued to get worse, and on the 18th July, he applied at St. Mary's Hospital for advice He received some medicine as an out-patient, but having no home to go to, he did not take it. The next day he went again, and had a blister applied below the jaw, but feeling worse towards evening, he applied for and received an order for admission into the Paddington Infirmary.

When admitted, I am told, he was in a very exhausted state; he breathed with difficulty, and could scarcely swallow some wine which was given him. The fetor from his mouth was most intolerable; he was restless, passed the night without any sleep, and was observed to throw his arms continually about.

I saw him at 2 P.M. on the following day. He was then worse than when admitted, his breathing was more difficult, and the swelling of his face had increased; this was most marked, as I have said, under the lower jaw, where it formed an enormous tumour. I have already mentioned some of his symptoms, but it may not be amiss to recapitulate the following. There was a profuse discharge of saliva running from his mouth; the tongue was tumid, and its surface covered with a white, moist fur; the gums were soft and swollen, and his teeth loose. On passing my finger under the tongue, a large elastic tumour was felt on each side of the frænum linguæ, apparently consisting of the enlarged sublingual and submaxillary glands, and the distended ducts of the latter. I made a free incision in each of these, and a great quantity of clear glairy mucus poured out, which gave the patient much relief. I was unable to examine the throat, on account of the general swelling of the parts, but from the character of the breathing, and the difficulty of swallowing, it was evidently swollen, and the isthmus faucium contracted. I could not, however, see any appearance of erosion, ulceration, or pustules. The nostrils were filled with a viscid, yellow, opaque secretion, which, as I have said, was with difficulty dislodged, on account of its tenacity. The conjunctivæ were injected, and the eyes watered profusely. The patient complained of severe headache, which was greatest over the eyes and frontal sinuses, but at times it was felt over the greater part of the head. He was very sick, could not retain food upon his stomach, and was very restless and uneasy. He stated, that he had not slept for a week. He was alternately chilly and hot, and, at times, broke out into cold sweats. His pulse was quick and weak, and he complained of great lassitude. He had no rheumatic pains, or any perceptible eruption on the skin or mucous membrane; the blister which had been applied had risen, and had a greenish, sloughy, unhealthy appearance. His bowels had twice acted during the morning, and he had made water freely.

TREATMENT. He was directed to take immediately an emetic, consisting of half a drachm of ipecacuanha, and, as soon as vomiting had ceased, to take five grains of the sesquicarbonate of ammonia in water every hour, using as little water as possible; to use frequently a gargle

of the chloride of lime, and to have wine and such nourishment as he could swallow given freely, and to take at night an opiate, consisting of twenty drops of the tincture.

July 21*st.* On visiting him in the afternoon, his appearance was in every respect improved; his face was less swollen, as was also the tongue and salivary glands. He spoke, breathed, and swallowed better. His tongue was reduced in size; he had slept comfortably during the night, and taken nourishment, such as beef-tea, freely. His pulse had fallen to 80; the skin was cool, and he had experienced no rigors during the day. He said that the emetic occasioned copious vomiting of green unhealthy matter, and that as soon as this had taken place, he felt relieved, and as if a load had been taken off him. He subsequently took the ammonia as directed. He was ordered to continue this, and to take five grains of blue pill at bed-time, as the tongue was still rather white.

July 22*nd.* Improving; the tongue was almost of its natural size, and there was very little swelling of the face or salivary glands. He spoke, breathed, and swallowed better; the breath was less fetid; the pulse was quiet; the skin cool; and the bowels open. He had slept well, and had a desire for solid food. To omit wine and beef-tea, and to have animal food, with a pint of porter daily. To continue the ammonia every four hours.

July 23*rd.* In every respect better. The swelling of the face and throat was less, as was also the discharge of saliva. He slept well, and enjoyed his food. To continue the ammonia every four hours.

July 24*th.* Better. He had slept well, and ate well; the bowels were open. The swelling of the face was now confined to the submaxillary region, and was very slight; he could breathe through his nose, and swallow without any difficulty. The tongue was clean, moist, and of its natural size; the gums were but very little swollen; the teeth were firmer; there was no fever or shivering; skin cool; pulse 72. To continue the ammonia every four hours.

July 25*th.* He was convalescing favourably.

July 28*th.* Up to this date he had been daily gaining ground. The ammonia was discontinued on the 25th, and since then he has been taking merely a nourishing diet, with a pint of porter daily. He now wished to be discharged, declaring that he never felt better in his life. He left the next day.

Diagnosis. The first question which occurs in the consideration of this case, is whether it is such as I have represented it to be, viz., one of acute glanders or not; and although the history, its mode of development, and the assemblage of symptoms, taken collectively, lead, in my opinion, to no other conclusion, yet, it must be admitted, there are points in which it differs from other cases of the disease which have been reported. Thus, in this, there was neither ecchymosis, gangrene, or pustules, observable upon the affected mucous membrane; neither was there any specific affection of the lymphatics or the cellular tissue, although such conditions are described as forming part of the disease when fully developed. If, then, these are to be regarded as essential to it, the genuineness of the present case may be doubted. But a perusal of those which have been published does not appear to me

to lead to this inference; whilst I may remark they amount to so small a number, and their history is in some respects so imperfect, that it is impossible to draw any positive conclusion from them as to the significance of particular symptoms. "Glanders", says Dr. Robert Williams, "is a disease consisting of primary fever and of local inflammation, but the local inflammation may occur independently of the fever. When the inflammation exists *per se*, the disease is termed chronic glanders; when the two are combined, it is termed acute glanders."[1] Judged by this rule, the present case must be considered as one of acute glanders, because there was both fever and local inflammation combined. The patient had indeed suffered from febrile symptoms for a week before any local inflammation declared itself, and up to the time of his admission had frequent rigors, succeeded by heats and cold sweats, and attended with lassitude and extreme prostration.

With regard again to the supervention of ecchymosis, gangrene, etc., in the pituitary membrane, it would appear from Mr. Blane's description of the disease in the horse, that the period of their occurrence varies very much in different cases. In describing chronic glanders, he says: "An increased and diseased secretion from the membrane of one or both nostrils continually flows in small or large quantities. The discharge is seldom at first perfectly purulent, but is more glairy, thick, and not unlike the white of egg, and it sometimes continues thus for a long time; at others, it soon becomes purulent, but even then there is always a degree of viscidity and glueyness in it that sticks the nostrils together as it were from its tenacity; thus differing from other pus, and which very circumstance strongly characterises the complaint. . . The disease sometimes remains long without producing ulceration; at other times, on the contrary, an ulcerating process quickly appears."[2] This quotation would show, that in the horse, inflammation of the Schneiderian membrane, attended with a discharge of a peculiar nature, viz., one possessing extreme viscidity and glueyness, is alone considered to be characteristic of the disease, and this feature was strongly marked in the present case. The patient's nostrils were filled with an offensive secretion, so adhesive, that it was only with difficulty that it could be got rid of, and it completely closed them up, so as to prevent the passage of air. But, independently of this, it appears to me, that the history of the case is alone sufficient to establish the diagnosis. The man was in good health when he undertook the care of several glandered horses; for a week he scarcely ever left the stable, and was with them, on an average, from five in the morning until eight in the evening. All this time he was necessarily breathing a very fetid and unhealthy atmosphere, and his face was often covered with the diseased secretions of the horses. At the end of a week, febrile symptoms manifest themselves, attended with great prostration; he perseveres in his employment, and in another week is attacked with headache, giddiness, and those peculiar affections of the salivary glands, mouth, and pituitary membrane, which must be considered as constituting the incipient, if not the confirmed, symptoms of glanders. This history alone, as I have re-

[1] Williams, R., M.D. Elements of Medicine, vol. ii, p. 376.
[2] Outlines of the Veterinary Art. Third Edition; p. 458.

marked, appears to be sufficient to establish the diagnosis, and I am supported in this view by an eminent authority. "It is impossible, perhaps", says Dr. Williams, "to enumerate every difficulty that may occur in the diagnosis, but when any doubt exists, an inquiry into the habits and employment of the party will probably solve the problem."[1]

Mode of Communication. Another point of interest in the case is the manner in which the disease was communicated to the patient, whether by infection—*i. e.*, through the atmosphere, or by direct contact with the diseased secretions; and in this latter case, was the surface to which they were applied abraded or entire? It was observed by Dr. Elliotson, in his valuable paper in the sixteenth volume of the *Medico-Chirurgical Transactions*, that he presumed that an abrasion of the surface to which the poison is applied is necessary for the production of the disease, because, he says, most veterinary surgeons are satisfied by experience that the matter of glanders never excites it in the horse, even if applied to the pituitary membrane of the nostrils while the surface is entire. The result of my inquiries in the present case would tend to shew that this opinion is incorrect, while it is at variance with the results of experiments which have been performed upon the lower animals. Thus we are informed that glanders has been produced by inserting the virus under the cutis with a lancet, and by rubbing it on the greasy heel of a horse. It has also been produced by inoculating the mucous membrane of the nose of the horse, or else by smearing that membrane with farcied matter. Farcied matter has also been made up into balls, and introduced into the stomach of a horse, and glanders has resulted. There can be no doubt, therefore, that the poison is absorbed both by the mucous and cutaneous tissues, and that being absorbed, it infects the blood.[2] In the present case, the patient assured me that he had no scratch or abrasion whatever of any surface upon which the morbid secretions were received; and hence the disease must have been given him either by infection, or by the application of the glanders matter to a mucous or cutaneous surface free from abrasion.

That he was favourably predisposed to take such a disease, will hereafter appear; but the manner in which the disease was communicated is important, because it tends to shew, that where a predisposition exists, it may be taken more readily than has been supposed; and that in regard to such persons the disease is as eminently contagious as others that result from morbific animal poisons. In the two first cases reported by Dr. Elliotson, in his interesting memoir, the virus was supposed to have been received through an abrasion of the cuticle; and this was also the case in the others referred to, or at least in all those in whom the mode of communication could be ascertained. This may explain a circumstance by which the present is distinguished from the majority of cases which have been related by him. I refer more particularly to the absence of specific disease of the cellular and cutaneous tissues, as well as of the lymphatic system, which would readily be accounted for if the poison were received into the system through the atmosphere, and the disease arrested before it had produced any secondary affections. Whether, however, this is

[1] Williams, R., M.D. Elements of Medicine, vol. ii, p. 391.
[2] Ibid. p. 374.

the case or not, we are justified in concluding that glanders may be communicated to man more readily than has been supposed, and in the absence of those conditions which have been considered as necessary for its production. Hence too much caution cannot be practised by those who have the charge, or are exposed to the effluvia of glandered horses, whether as regards breathing the atmosphere of their stables, or avoiding contact with their diseased secretions.

Period of Latency. I am not aware that any facts have been collected on this point, bearing upon the disease as met with in the human subject. Dr. Robert Williams observes that the poison in general has been latent from two to eight days, but he gives no facts, nor the data upon which this statement is founded. In the present case I questioned the man particularly on this point; and it appears that constitutional symptoms, viz., sickness, rigors, and fever, commenced on the seventh day after he had been taking care of the horses; and that the swelling of the face, the affection of the salivary glands, and that of the pituitary membrane, took place on the fourteenth.

Predisposing Causes. That this patient was predisposed to the disease, or rather that the state of his constitution was such as to render it susceptible to the operation of any disturbing causes which might surround it, would appear to be almost certain from a consideration of his previous history. For some time before he took charge of these horses, he had been in very destitute circumstances; badly fed, lodged, and clothed. His constitutional powers must therefore have been enfeebled, and his capability of resisting morbific influences consequently slight, and hence we may account for the ready manner in which he succumbed to the specific causes of the disease. So far, then, the case furnishes additional testimony to the truth of the doctrine, that debility, however induced, whether by want or illness, favours the extension of fever, of epidemic, and infectious diseases; and it supports the general observation that has been made in regard to glanders, that the parties who have generally contracted it have been of intemperate habits, or have had indifferent health at the time of their falling ill or contracting the disease. As this patient was exposed both to an infected atmosphere, and had also the diseased secretion applied to his face, it is difficult to say in which of the two modes it was communicated. The history of his attack would lead me to think, as I have observed, that it was most probably through the atmosphere; and there is no reason to doubt that, under certain circumstances, it may be so communicated. It is well known, for instance, that in horses the glanders often originates in this way; and all farmers are agreed that dirty, close, and ill ventilated stables, out of which the dung is seldom removed, and the situation low and damp, are fruitful sources of it. Whether the disease is thus communicable to man, has not been as clearly ascertained; for the most part, we should be justified in saying that it is not, because numbers often breathe an infected atmosphere without catching the disease. But this immunity cannot be regarded as universal, or as exempting those who are strongly predisposed to it, whether from ill health, intemperance, or destitution.

Treatment. In offering some remarks upon the treatment of the

present case, I cannot introduce the subject better than by quoting the following passage from Dr. R. Williams's philosophical work *On Morbid Poisons*. "All the remedies hitherto tried in acute glanders have failed, for only one out of fifteen has recovered, and that not from any particular treatment. Blood, when taken at the commencement, has been found buffed, and some momentary relief has been afforded, but the bleeding ought not to be repeated, as in the more advanced stages the prostration is great, and stupor quickly follows, and leech bites have become gangrenous. The coming on of typhoid symptoms has caused quina, valerian, serpentaria, ammonia, and other stimulating medicines to be exhibited, but all these experiments have failed; vomiting and purging have been likewise had recourse to, but these measures have been equally unsuccessful. In the present state of our knowledge of this disease, every experiment in treatment is warranted as the only chance of subduing a malady which has so constantly proved fatal. In the more chronic forms of the disease, the recovery of the patient has appeared rather to be owing to the excellence of his constitution, than to any powerful effect produced either by general or local treatment."[1]

In the present instance, I had no reasonable expectation of the patient recovering, nor had he, or any one who was present at the time when I first saw him; and yet in twenty-four hours he was comparatively out of danger. Now this change cannot be ascribed to any improvement in his sanitary condition consequent upon coming into hospital. For, in spite of wine and other assistance, he was worse then than when he was admitted. Hence I think that the improvement which took place must be mainly attributed to the treatment, which may be thus recapitulated in the order of sequence. 1st. An incision in each of the Whartonian ducts. 2ndly. An emetic of ipecacuanha. 3rdly. Sesquicarbonate of ammonia in water hourly, as concentrated as it could be swallowed. 4thly. An opiate at bed time, with wine and nourishment, in such quantities as the patient could be prevailed upon to take.

The incision was made in the Whartonian ducts on account of their being much distended, and from an impression that their orifices were closed from the swollen state of their parietes. It gave immediate relief to the patient, by allowing a free escape of a large quantity of pent-up saliva, and the swelling and tension of the parts were at once lessened by it. The emetic was considered to be indicated by the existence of gastric derangement throughout the progress of the case, which was manifested by a constant disposition to sickness, and the inability of the patient to retain anything upon his stomach. It was also given for the purpose of producing reaction, and rousing the constitutional powers by its operation upon the ganglionic nervous centres.

But the principal reliance was placed upon the frequent administration of the sesquicarbonate of ammonia *in a concentrated form*. This remedy, and this mode of exhibiting it, were suggested by the good effects which I had seen it produce when so given in the severe affections of the throat, which are met with in malignant scarlet-fever. It was originally recommended by Dr. Peart in such cases,

[1] Op. cit., vol. ii, p. 392.

in a work on the malignant scarlet-fever and sore throat, which he published in 1802; and its efficacy is corroborated by Mr. Wilkinson, who quotes also the testimony of Mr. Ricardo in its favour. As, however, the works in question are not very accessible to the profession, and as in the particular case under consideration, it appeared to have been most beneficial, and to have been the main cause of the patient's recovery, I shall add a few remarks upon the remedy as thus exhibited.

Ammonia is reported to have been given in glanders, but without success; and the same remark has been made with reference to its exhibition in scarlet fever: but it is not so much to the medicine, as to the method of giving it, that we are, I apprehend, to look for beneficial results. On this point, Mr. Wilkinson remarks: "It has been observed that Dr. Peart has no claim to originality in the employment of the subcarbonate of ammonia in the cure of scarlatina, Dr. Withering having used the same remedy many years before: but may there not be almost as much originality in the *manner* of exhibiting a remedy, as in the first adoption of it? Dr. Withering says, that the volatile alkali may likewise be given with advantage; but it is difficult to get a sufficient quantity of it swallowed (p. 84); and he prescribes it in the following form. ℞ Sal. absinth. ʒij, sa. vol. ammon. ʒss, aq. fontan. ʒij. M. Ft. solutio, to be put in a quart of white wine whey, and the whole to be taken in twenty-four hours; by which it appears to me that he knew little of the powers of subcarbonate of ammonia in this disease. His manner of exhibiting it would destroy its effects, or at least the effects upon which I should depend for its advantages in scarlatina."[1] These remarks appear to me to be equally applicable to the treatment of glanders with ammonia, as it is ordinarily given.

On the other hand, it was an essential part of Dr. Peart's treatment of the scarlatina, anginosa, and maligna, that it must be given in a state as strongly stimulating as it can be swallowed. His mode of exhibiting it is contained in the following passage, which is quoted from Dr. Willan. "He dissolves two drachms of the carbonate of ammonia in five ounces of water, and directs the patient to take two teaspoonfuls every two, three, or four hours, according to the urgency of the symptoms. If the difficulty of swallowing abate, and the patient wish for it, a little cold water may be added to each dose. Cold water, or toast and water, may be drank at pleasure. The above remedy was given in every form and in every stage of the scarlatina. Some," he says, "were glowing with universal efflorescence; in some the extremities were swelled; in others fetid ulcers appeared; in most the throat was swelled and inflamed, often ulcerated, and respiration almost prevented; but, in the most alarming cases, a scorching fever and raging delirium rendered the patient's situation horribly distressing. Yet, in all these variations of the disease, the volatile alkali was my specific, which I administered to between two and three hundred patients *successively and successfully*." The immediate effects of the remedy are stated to be, a diminution of heat, fever, and delirium, and a disposition to sleep. Mr. Wilkinson confirms the accuracy of these remarks; and, in regard to the *modus operandi* of the medicine,

[1] Wilkinson, J. H. Remarks on Cutaneous Diseases, pp. 19-20. Lond.: 1822.

says: "I will take the liberty to state, that I depend not upon its diuretic nor its diaphoretic qualities, but believe that it possesses the power of increasing the strength of the arterial action, at the same time that it diminishes its frequency; that it supports the vis vitæ, without increasing the heat or irritability of the system; and by such means counteracts the tendency in the scarlatina, anginosa and maligna, to ulceration and sloughing, and all the other evils which sometimes attend this dreadful disease."[1]

Mr. Wilkinson further gives the following practical illustration of the success which attended the treatment of scarlet fever in this way. "In the year 1803," he says, "I attended several cases of the scarlatina maligna with Dr. Willan and the late Dr. Hamilton. It is well known that the disease raged most fatally during that period; and we lost four of our patients out of five in one family. Never were men more puzzled to know what remedies to adopt. All which Dr. Willan has recommended in his publication were employed. Emetics, purgatives, calomel, and antimony, many other diaphoretics, opium, wine and acids, bark, blisters, decoct. contrajervæ with oxymel of squills, application of cold water, gargles of different descriptions, fumigations, etc., all without the least good effect, all without making the least sensible impression upon the disease in any of its stages. About this time, Dr. Peart published his *Practical Information on the Malignant Scarlet Fever and Sore Throat,* in which he describes the wonderful effects of the subcarbonate of ammonia, and considers it to be endowed with a specific power over that disease. Like other practitioners, he was continually lamenting the loss of his patients by that dreadful malady, till, by his own suggestion, he employed the subcarbonate of ammonia in the manner he describes; and from that moment he did not lose one patient, out of nearly three hundred. When I read this account, I immediately inquired after the character of Dr. Peart, and finding that he was most respectable both in talent and probity, and engaged in very considerable practice, I had no reason to doubt the truth of his statement, and therefore immediately adopted his remedy; and consonant with my own principle, that an effectual remedy for one genus, will, with proper management, cure all the genera of the same order, I administered it in all the following diseases—erysipelas, rubeola, scarlatina, urticara, roseola, and erythema, with all their varieties; and I am happy to be able to declare, that from that moment to the present, a space of seventeen years, I have not only never lost a patient in the above diseases, but have never had a case of the kind that has even appeared dangerous, or that has given me a moment's anxiety."

In addition to his own, he adduces the following testimony to the remedial powers of ammonia, when so given, from Mr. Ricardo, of Bow, a gentleman of great ability, and very extensive practice: "I have received your letter, requesting me to state the result of my experience of the effects of subcarbonate of ammonia in the treatment of measles, scarlatina, and erysipelas. As I employed this medicine at your suggestion, many years ago, I lament that I have not placed on record any *particular* cases, many such having been under my care; but perhaps it may be sufficient for your purpose, that I am able to

[1] Op. cit., p. 20, et seq.

declare that the exhibition of subcarbonate of ammonia in such cases has been attended, under my direction, with constant success. You know that I am situated in the neighbourhood of many schools, which I have the pleasure of attending; and during twelve or fourteen years, in which I have employed the subcarbonate of ammonia, I have not lost a single patient, of some hundreds whom I have attended in the above diseases."

I have quoted these passages at some length, not only because the plan of treatment they refer to was adopted in the case of glanders which I have reported, with very striking results, but because I believe that the principle comprehended in it is applicable to many other analogous diseases, in which it has hitherto not been tried; and, further, because I am anxious to do justice to those with whom the merit of originating it rests. It furnishes, moreover, a good illustration of the practical views which abound in the writings of our predecessors; and of the many useful facts and suggestions which are to be met with in what may be termed the indigenous medical literature of this country; and, although at the present day a preference is too often given to doctrines which have been imported, whose chief recommendation is their novelty, it would be difficult to find, in any medical records, richer or more valuable contributions, and such as are likely to be more permanently useful, than those which have been made by the zeal and persevering industry of our forefathers. I cannot doubt of the utility of this particular mode of treatment, in this and other diseases in which I have tried it; and I have less hesitation in recommending it to professional notice, as I do not lay any claim to the merit of introducing it. I would, however, observe, that there is much in the history of glanders which assimilates it to the more malignant forms of scarlet fever. Both, for instance, arise from a specific contagion; in both there is a similarity in the parts which are more especially implicated, viz., the throat, the respiratory mucous membrane, and the salivary glands; and in each there is a tendency to ulceration, sloughing, and destruction of the tissue of these parts. These circumstances furnish grounds for believing, *a priori*, that the medicine which would be best adapted for one disease, would be most curative of the other; and this conclusion, which is suggested by careful reflection, is confirmed by practical observation, so far at least as the issue of the present case is concerned.

It is unnecessary to dwell upon the other items of treatment; the use of opium was clearly indicated upon general grounds. The employment of gargles of the chlorides of lime and soda in ulcerative affections of the mouth and throat, has been long sanctioned by general experience; and there could be no doubt as to the necessity of administering wine freely, with such support as the patient was able to take.

Chester Place, Hyde Park Gardens, August 1851.

ON A NEW APPARATUS FOR FRACTURED CLAVICLE.

By HENRY LEE, Esq., F.R.C.S.Eng., Assistant-Surgeon to King's College Hospital; and Surgeon to the Lock Hospital.

The principal use of the clavicle in man is to keep the shoulder at the requisite distance from the body, and, by affording it an unyielding support, to enable the muscles to move it, and to maintain it in position. When the clavicle is broken, the shoulder falls in, being drawn by the action of the muscles into contact with the ribs. It also falls, in obedience to the laws of gravitation, according to the position of the body. In the erect position, therefore, the shoulder will be found lower than natural, as well as to have lost something of its lateral prominence.

Different methods have been proposed for the treatment of this fracture. The most common method is the figure-of-eight bandage applied about the shoulders. This keeps the two scapulæ on the back of the chest, and prevents their anterior edges from falling forwards. Some degree of extension is made in this way, but still it rarely happens that the fractured extremities can by this means be brought into apposition; and one reason of this is, no doubt, that it affords no provision against the shoulder falling by its natural weight.

A second plan of treatment, which may, with certain modifications, be combined with the former, is that of M. Desault. This consists of a cushion, in the shape of a wedge, placed in the axilla, with the broad part upward. The thin point is prolonged so as to reach as low as the short ribs. This cushion is retained in its place by a bandage, and the arm is bound down upon it. The upper part of the cushion thus acts as a fulcrum, the part of the humerus below it as a lever, and the shoulders are by this means drawn asunder. An artificial clavicle is thus formed, while the natural one is being repaired. This apparatus is, however, very difficult to apply, and demands that the patient should be kept at rest afterwards. In a few days, even with the greatest care, the bandage will require to be readjusted, and this necessarily involves a disturbance of the fractured extremities. But the chief objection to this apparatus lies, perhaps, in the circumstance of the cushion resting upon the moveable ribs. As the extending power is always the same, and depends upon the elbow being fixed by an unyielding bandage, it follows, that any motion which is allowed at the point of support, or at the fulcrum, must necessarily be communicated to the free extremity of the lever; and, consequently, in the case before us, would tell upon the fractured portion of the clavicle.

A third plan, which has recently been adopted for fracture of the clavicle, is that which was suggested by Mr. Ellis. It consists in the adaptation of a firm cushion, in the shape of the top of a crutch, to the axilla of the affected side. This rests upon a vertical plate, which reaches nearly as low down as the crest of the ilium. The apparatus is supported and retained in its position by a band extending over the opposite shoulder. Extension is then made by using the arm as a lever, as in Desault's method of treatment; but, as in that, the cushion which forms the fulcrum is constantly liable to move with the motions of the ribs.

Messrs. Philp and Whicker, of 67, St. James' Street, have, at my request, constructed an apparatus, by means of which lateral extension can be made in cases of fractured clavicle from a fixed point. It consists of a backboard, retained in its position by two broad straps crossing over the shoulders, and by a perpendicular plate reaching to the loins, and connected with a band round the waist; a firm cushion is adapted to each axilla, and extends to the front of the shoulder-joint. To the anterior extremities of these, the straps which go over the shoulders are buckled. Each cushion is directly connected with the backboard by means of a steel bar, slightly concave forward, and capable of being extended laterally and fixed in position by means of a screw. When applied, the two cushions are separated to a convenient distance and fitted to the axillæ. The straps are drawn moderately tight over the shoulders, and the elbow of the affected side is connected with the body by means of a handkerchief or bandage. It is advisable also to support the arm in a sling; and this may be conveniently done by passing a broad band from the elbow in front and behind the arm to the opposite shoulder, below which the cushion in the axilla affords a fixed point for its attachment.

The principal advantage of this apparatus consists in its different parts being so connected and adjusted as not to move with the motions of the ribs; for as these are raised, in all their ordinary actions, simultaneously on both sides, any influence which they possess must be exercised equally in different directions; and as corresponding parts of the apparatus are placed upon the two sides of the chest, any tendency to displacement is exactly met and counteracted by a similar tendency from the opposite side. The result is, that although the cushions rest upon the ribs, they yet do not move with the ribs, but afford firm, and comparatively fixed points of support.

A second advantage of this apparatus consists in its not requiring to be readjusted; should the bandage round the body, or the sling which supports the arm become loose, they may be tightened without in any way disturbing the position of the instrument, or the fracture.

A third point of some importance is, that the arm on the opposite side to the fracture is not confined, and the patient may, in ordinary cases, be allowed to walk about as soon as the instrument is properly adjusted.

In severe fractures of the clavicle, and in such as are complicated with injury to the ribs, it may become desirable to remove all pressure from the side of the chest.[1] This may readily be accomplished by increasing the distance between the two cushions, and connecting *both* the arms with the body. Any amount of lateral extension may in this way be made without any pressure upon the ribs, and even without interfering in any degree with their actions.

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[1] It was reported in the case of the late Sir Robert Peel, that he was quite unable to bear the pressure of the ordinary clavicle bandage upon the chest.

CASE OF COLLOID OR GELATINIFORM CANCER OF THE PERITONEUM AND COLON; WITH REMARKS.

By ROBERT HUNTER SEMPLE, M.D., and EDWARD BALLARD, M.D.

Case. Mary Hall, aged 66, an inmate of the Islington Workhouse, moderately well-formed, rather thin and pale, but not remarkably so, presented herself for medical relief on the 23rd of April, 1851. She complained of pain in the bowels, with purging, and some vomiting. She did not represent her case as a serious one, and she was not in the infirmary. The disease was considered as a common disorder of the bowels; and she was accordingly ordered to take the following: ℞ Tr. opii ʒss, mag. carb. ʒss, sulph. mag. ʒij, aq. menth. pip. ʒvj. Sumat coch. ij magna 4tis horis.

April 25. The pain in the stomach and bowels was not relieved; the tongue was furred; the skin hot and dry; purging still continued; vomiting had ceased. She was ordered to take the following: ℞ Hydr. c. cretâ, pulv. ipecac. co., āā gr. iij. Fiat pulvis 4tis horis sumendus. She improved slightly under this treatment; but, as she did not lose all the symptoms, she was ordered into the infirmary, in order that she might be seen and examined in bed.

April 28. She was now lying in bed, undressed, and the state of the abdomen was carefully examined. It was generally soft and yielding, and resonant; but, owing to the pain experienced in the manipulation, the abdominal muscles were put upon the stretch, which considerably obscured the physical symptoms. It was very evident, however, that a dulness existed below the stomach, and there was a feeling of an irregular, soft, tumefied mass in that situation. The palpation of this tumid part caused great pain, and the pain was not at all relieved, but, on the contrary, was very much increased by pressure, especially by firm pressure. There was want of appetite, furred tongue, dry and hot skin, thirst, and diarrhœa; the stools were fluid and frothy, but not fæculent; the pulse was rapid and rather full. Under these circumstances, Dr. Semple considered that, whatever the disease might ultimately prove to be, there was, at the period now described, a local inflammation of the colon, and that, although there was diarrhœa, there was nevertheless abundance of fæcal matter impacted in the intestine, which might probably be the cause of the present mischief. This opinion was founded upon the circumstance, that Dr. Semple had often observed in old persons who neglected the state of their bowels, that great fæcal accumulations often led to inflammatory conditions of the intestinal canal, and that, although in such cases diarrhœa often existed, it should not be allowed to mislead the practitioner, and to induce him to trust to astringent remedies. There was at this period no emaciation, nor any other appearance to lead to the suspicion of organic disease. She was therefore directed to remain in bed, to take liquids for her food, *and to apply eight leeches over the situation of the supposed tumour*. She was also directed to apply warm poultices after the leeches were removed.

April 30. She was decidedly relieved by the application of the leeches, which had bled well; but there was still a great degree of tenderness on

pressure, and the diarrhœa continued. The muscles of the abdomen being now less contracted, there was felt a distinct tumefaction over the course of the colon. Under the impression that there was inflammatory disease, and that, notwithstanding the diarrhœa, there was still an accumulation of fæculent matter in the intestines, the following plan was recommended. Six more leeches were directed to be applied over the region of the colon, and the leech-bites fomented as before. The following medicines were also ordered: ℞ Hydrargyri chloridi gr. ij, opii gr. ½. Ft. pilula 6tis horis sumenda. ℞ Tincturæ catechu ʒij, aquæ menth. pip. ʒvj. Sumat cochlearia ij magna 4tis horis.

May 2. She was decidedly better: the tenderness on pressure was very much relieved; the diarrhœa was less frequent. She was directed to continue the medicines.

May 3. Her bowels had now become confined, and she was accordingly ordered to discontinue the former medicines, and to take an ounce of castor oil.

May 4. She now reported that she was very much better; the tenderness had almost disappeared; her tongue was cleaning. She stated, that during the night she had been to the water-closet and had passed, with great difficulty, some hard lumps like stones, but which unfortunately she had not preserved, and that the evacuation of these masses was attended with immediate relief. Dr. Semple therefore considered, that his conjecture as to the existence of hard fæculent masses in the intestine had been correctly formed; and he therefore, in order to evacuate any remaining portions of such matter, directed her to take an ounce of the common purging mixture, consisting of salts and senna, every four hours. (It will be seen, by reference to the *post-mortem* examination, that there was a large quantity of fæcal matter found in the intestines after death.)

May 8. The patient was still improving, and expressed herself better in all respects; she slept well at night, and had very little pain in the abdomen. She complained, however, of flatulence, acidity of the stomach, and want of appetite, and she was accordingly ordered the following: ℞ Liq. potassæ ʒij, essentiæ menth. pip. ʒss, infus. gentianæ ʒvj. Ft. mist., cujus sumat coch. ij magna 4tis horis.

May 9. She now complained of some feverish symptoms, as hot, dry skin, furred tongue, and thirst, and she was accordingly ordered to take the following febrifuge mixture. ℞ Antimon. potassio-tart. gr. j, sp. æth. nitrici ʒij, liq. amm. acet., et mist. camph., āā ʒiij. M. Ft. mist., cujus sumat coch. ij magna 4tis horis. This medicine allayed the feverish symptoms.

She now became so much better that she was able to leave her bed, and, at her own request, was allowed a mutton chop daily, with half a pint of porter, which she duly consumed; and the only medicine she took was an occasional dose of infusion of gentian, which she found to strengthen her. After the lapse of about a month, however, she again began to complain of pain in the abdomen, of sleepless nights, and of a deficiency of appetite. She was often examined carefully, and the tumefaction over the region of the colon was distinctly recognised; the tumour, however, was soft and quite moveable, and there was no nodulation apparent in any part. At this time, Dr. Semple suspected the existence of organic disease, and expressed an opinion

that the nature of the case was one of the soft forms of cancer, and, indeed, he considered it to be a tumour of medullary sarcoma. Under this impression, she was ordered to take small doses occasionally of tincture of henbane in peppermint water.

June 17. The pain was not diminished by the use of the henbane; she had sleepless nights; and her appetite, although not lost, had become capricious, and she was allowed, at her own request, to have sometimes fish, and sometimes eggs, in place of the mutton chop. In order to allay the pain, of which she continually complained, she was ordered to take twenty minims of tincture of opium every four hours in peppermint water. This produced some alleviation of the pain, and she accordingly took it every day for a considerable time. The case was now regarded as hopeless, and the symptoms of organic disease became quite apparent; the features became shrunk, there was excessive emaciation, and total loss of appetite; the pulse was rapid, and very feeble; she retained her consciousness throughout, and wished for death to release her from her sufferings. She never had any fæcal vomiting, nor was she latterly troubled with vomiting at all. She was ordered to take the opiate occasionally. She gradually sank, and died on the 29th of July.

Post-Mortem Examination of the Body, made on the 30th of July by Dr. Ballard and Dr. Semple.

Conformation. Spare; muscles pale; scarcely any subcutaneous fat.

Head. Brain quite healthy.

Chest. Pleuræ both healthy; no adhesion; lungs slightly emphysematous; a little puckering with cretaceous matter at the apex of each; heart small.

Abdomen. The tumour perceived during life was evident on handling the abdomen; it was firm, and slightly moveable, emitting a dull sound on percussion, bordered by resonance of the intestines below, and of the stomach between it and the hepatic dulness above. It extended across the abdomen, in the direction of the transverse colon, an inch below the umbilicus; and, on opening the abdomen, the parietes were found strongly adherent to it, in the middle line, over a circular extent of about two and a half inches diameter. The situation of the parts then displayed was as follows: The tumour, which turned out to be in the transverse colon, lay across the abdomen, at the level mentioned; and the stomach, which was of full size, occupied, with the liver, its natural position, a part of it lying between the tumour and the edge of the liver. The cæcum and ascending colon were not found in their usual position, but placed in a line with the transverse colon; the cæcum occupying a position in the right flank, and the extremity of the ileum crossing the iliac fossa to enter it. The small intestines were tolerably filled with flatus. The sigmoid flexure was lying altogether within the pelvis; and, with the rectum, was filled with solid fæces. With the exception of the serous covering of the liver, spleen, and stomach, every part of the peritoneum, parietal and visceral, together with its folds, was studded with minute granular elevations, which rendered the surface rough to the finger passed over it. Each granule was surrounded by a little zone of redness. At first sight, they were taken for miliary tubercles; but, on the nature of the tumour being discovered, they were subjected to closer examin-

ation, and found to consist each of a little bit of gelatinous matter, enclosed in the substance of the serous membrane: in no case were the grains found to be bilocular. There were but few on the diaphragmatic peritoneum, and at the upper part of the abdomen; but were more abundant, and placed closer, over all those parts which lay below and towards the pelvis: here, too, some were larger, and nearly of the size of small peas. The tumour consisted of the transverse arch of the colon, which was adherent above to a part of the great curvature of the stomach, and below to a part of the jejunum; and it presented externally a purple discoloured appearance. On handling it, part of its substance gave way, and a portion of the contents passed into the peritoneal cavity. The cæcum was filled with liquid fæces. On passing the finger from it into the tumefied transverse colon, the canal was found so contracted as scarcely to admit it for about six inches. It was laid open throughout, and the nature of the disease then became evident. Throughout the contracted portion, the internal surface was raised into large rugose elevations of irregular shape, but most of them with their long diameter placed transversely. The wall of the intestine was thickened to the extent of from one-eighth to half an inch. The whole rugæ and intestinal wall were filled with locular colloid cancer, which had evidently first infiltrated the mucous membrane, and then passed through the muscular coat to the serous, which in some parts it had infiltrated also; in other parts, this membrane passed unaltered over the colloid matter. Near the commencement of the descending colon, there were small isolated elevations, of the size of a pea and larger, on the mucous surface, each consisting of gelatiniform matter contained in loculi. The cell in many parts opened upon the free surface of the membrane, which here exhibited, when examined in water, a reticulated appearance. At the adherent part, the mucous membrane of the stomach presented some purple discolouration; and, on floating out the mass of disease in water, several foramina were observed, by which a probe could be passed from the stomach into the contracted part of the colon. The rest of the stomach was healthy. The liver presented the appearance known as biliary congestion: the gall-bladder contained thirty largish angular gall-stones, two of them firmly impacted in its duct. The spleen was natural. The left kidney was small, with a lobulated exterior, and felt soft and fluctuating. On section, it was found universally hollowed out into cysts, as large as a hazel nut, most of them containing a clear serous fluid; none of the natural tissues of the organ remained. The right kidney was nearly twice its natural size, and at its lower extremity presented three or four cysts, similar to those in the left; but the whole upper two-thirds was hypertrophied, soft, and watery. The ovaries were small and hard. The uterus was small, but healthy. The bladder was healthy.

Remarks. The rarity of the occurrence of colloid as compared with that of scirrhous and the encephaloid forms of cancer, and the little frequency with which cancer of the large intestine (except of the rectum, perhaps) is met with at all, give an interest to this case. Judging from the appearance of that part of the colon where the disease was in an incipient state, the infiltration commenced in the mucous membrane, and extended from this through the thickness of the wall of the intes-

tine. Along with the progress of the infiltration, a process of shortening of the canal appears to have gone on, which, as the shortening portion was fixed by adhesion, resulted in the traction from their natural position of the cæcum and ascending colon. In a case of gelatiniform cancer of the peritoneum, published by Dr. Ballard in the *Medico-Chirurgical Transactions*, the advanced result of this affection, when occurring in the serous membrane, was exhibited. The present case is of interest in connexion with that, as shewing how the disease may commence in single loculi, scattered like tubercles on the surface of the membrane. Had this patient lived, no doubt more of these granules would have become developed; they would have formed an uniform layer over the membrane, new loculi would have become developed about them, and complete infiltration, with thickening of the membrane, would, as in that case, have been the result. In this instance, the disease of the serous membrane, though plainly consecutive to that of the colon, evidently arose independently of it, and, from its appearance in so many different foci, could only be supposed to have occurred from general contamination of the nutritive system with the sort of cancerous diathesis. It may be observed further, in connexion with the case, that it occurred, as colloid cancer mostly does, in a female.

The history of the case, as recorded by Dr. Semple, though pointing to the large intestine, and especially to its transverse arch as the locality of the disease, by no means indicates its nature. Indeed, apart from a consideration of the general symptoms, we do not see how even its seat could have been discovered with any accuracy, by the amount of physical exploration employed.

There are three other points to which we desire to direct attention. One of these is the absence of any fæcal vomiting, as symptomatic of the communications between the stomach and the colon, and the absence of fæcal matter at all in the former after death. The fact was, that the communications were by foramina, which appeared to have been formed by the breaking down of cancerous loculi, which had reached through the adherent organs; and not only were the communications blocked up by gelatinous matter, but they were probably closed also by pressure of the cancerous developments bounding them. Another remark we have to make, is on the absence of the cancerous aspect so commonly observed in the cachexia which accompanies the occurrence of other forms of cancer. The same absence of sallowness was observed in the case before referred to, and would appear to place some more marked distinction than is at present recognised between colloid cancer and the other forms of the disease. Our third remark is in connexion with the fact, that colloid cancer does not kill the patient, as scirrhous and encephaloid often do, by a general effect on the blood and nutrition of the body, but may go on increasing and extending its ravages far and wide, in the part that it attacks; the patient meanwhile only suffering from the encroachment it makes upon the functions of parts, whose healthy action is more or less necessary to life. This is illustrated in the case before us. The immediate cause of death was the contracted state of the large intestine, and would have taken place in the same manner, had the cause of the contraction been inflammatory or hypertrophous, in place of being cancerous. In Dr. Ballard's case, again, no constitutional symptoms of cancer

were present, the symptoms which the patient presented being due to the pressure of the new formation upon the organs of the chest and abdomen; and the patient died as if she had been worn out with ascites, ovarian tumour, or any other disease acting in a similar manner.

CLINICAL ILLUSTRATIONS OF DISEASES OF THE NERVOUS SYSTEM.

By ROBERT HUNTER SEMPLE, M.D.

CASE OF ACUTE SUICIDAL MANIA TERMINATING FATALLY.

Case. Henry Staples, aged 23, a boot-closer, of average size and conformation; thin, spare, rather tall; rather good-looking than otherwise.

Previous History. His father had been twice insane; the first time, was upwards of twenty years ago, when he was very gloomy, melancholy, and desponding; and, according to the account which I received from his eldest son, he was in a state of insanity when the subject of the present case was conceived. About ten years ago, the father made an attempt upon his life by cutting his throat, and was accordingly taken to St. Bartholomew's Hospital, where he was kept closely watched and under restraint, and where he eventually recovered; and was now (July 1851) in a sufficiently sane state to manage his affairs. I was informed that the subject of the present case had been well brought up, and had been educated as well as, or rather better than persons in his rank of life usually are; he was by no means ignorant. His brother stated that, from his earliest youth he had exhibited symptoms of moroseness of disposition and sulkiness; but that he now attributed these peculiarities to the influence of hereditary mental disease. He was reported to have been always a very steady young man, attentive to his work, esteemed by his employers, and not at all addicted to drink, or to sexual indulgence.[1]

On Friday, July 4, 1851, an alteration was observed in his manner; he complained of unusual lowness of spirits, and began crying like a child; he had also pains in his limbs, and general uneasiness. On Sunday morning he rose from bed, and talked in a wild and incoherent manner; he also began dancing and capering about the room. Three of his acquaintances came in to see him, and proposed an excursion to Epping Forest to raise his spirits and to amuse him. It appears that they took him with them, and gave him some cold brandy and water, together with ale and ginger-beer. It does not appear that they drank much; but, when the subject of the case came home, he was furiously delirious. In consequence, a medical man was sent for, who administered some medicine, and told the relatives that he would pass some

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[1] His brother has told me, that he used to have frequent conversations with him, and that he often complained of lowness of spirits; that, from reading some medical book, he had come to the conclusion that he had injured himself by extreme continence; and that he was continually in dread of alienation of mind.

black stools, and that, after doing so, he would be better. On Monday morning he was rather better, but in the afternoon he was seized with general trembling and crying. During the night of Monday, he made repeated attempts to strangle himself, by placing his thumbs over his throat, but these attempts were observed and frustrated by his brothers. On Tuesday he dressed himself, and went out with one of his brothers, but was evidently extremely uneasy in his mind, reproaching himself that *he had never got married*, that he had injured his health by extreme continence, and that he should become an idiot. During Tuesday night, he became worse, and was almost uncontrollable, and tried to destroy himself in whatever way he could, by using the instruments and tools employed in his trade. On Wednesday morning, at six o'clock, he was taken out into the air by his brothers, in the hope of soothing him; but, on their leaving him for only a few yards behind them, they perceived, on looking back, that he was knocking his head violently against a lamp-post. He was then brought home when his family were at breakfast, and, when unperceived for a moment, he seized a knife and drew it across his throat, but the knife was immediately secured by one of his brothers. He was then taken out again for the purpose of diverting him, to the house of one of his brothers; but while there he tried to jump out of the window, and also to strangle himself with his handkerchief; in fact, he made every attempt in his power to destroy himself. On Wednesday afternoon, he was seen by Mr. Hutchinson, one of the parish surgeons of St. Mary, Islington, and he was sent by him, on a lunatic certificate, to the Islington Infirmary, with a view to his conveyance to a lunatic asylum. He had now become so excessively violent, that it was impossible to restrain him by ordinary means, and he was carried to the workhouse in a strait jacket, and with his legs bound. The brother who furnished me with this account, stated that, so far as he knew, his head was not particularly hot, nor did he ever complain of headache, but his eyes were wild, and he asked for water; he had no sleep since Monday night, when he slept for about an hour and a half.

He was brought to the Islington Infirmary on Thursday, July 10.

When I saw him, he was in a very excited state, calling out loudly; he was confined by a strait waistcoat. His head was very hot; his skin was hot, dry, and parched; his pulse was rapid, but not very full; his tongue was dry and furred, his pupils torpid; he was very thirsty. His head was ordered to be shaved, and vinegar and water to be applied to the scalp; and eight leeches were ordered to be applied to the temples.

July 11. He was much the same; still uncontrollably violent, and necessarily confined in the strait waistcoat; head still hot; eye-balls rolling and prominent; pupils neither much contracted nor much dilated; tongue furred; bowels confined; skin hot. Although he was very violent, he nevertheless knew what was said to him, and put out his tongue when he was asked to do so; but he appeared to be in dread of something or somebody; and continually asked to be spared from some imaginary tormentor. He always addressed me by name, and begged me to relieve him from some apprehended danger; but he was so incoherent that I could not ascertain what he meant. I should mention that, except in the particular of restraint, he was treated with great

kindness. He was so exceedingly violent, that not only did he perpetually attempt to strangle himself in bed, to jump out of the window, and to kill himself by knocking his head against the wall, but he was also dangerous to others, for, although his arms and legs were confined, he bit one of his nurses very severely, and with his teeth he tore his coat in two. By my express directions, therefore, he was kept under restraint by physical means. He was ordered to take the following: ℞ Hydr. chloridi gr. iij. Fiat pilula 4tis horis sumenda. ℞ Sulph. mag. ʒss, inf. sennæ ʒvj. Ft. mist., cujus sumat coch. ij magna 4tis horis.

I ought to mention, that I was requested at this time to sign an order, for the purpose of conveying this man to a lunatic asylum, but I declined to do so for the following reasons. He was in such a state of bodily disease as to require the most careful medical treatment; and the steps necessary to be taken in the case of pauper lunatics, of conveying them for examination before a magistrate, bringing them back to the Infirmary, and subsequently conducting them for several miles to a lunatic asylum, could not, I conceived, be adopted in the present case, without imminent danger to the life of the man himself, and to the safety of others.

July 12. He was slightly better, but still very incoherent. His bowels had been freely opened, and he had passed a large quantity of very dark, almost black, stools. The head was not so hot; there was no alteration in the appearance of the pupils. He was directed to apply a large blister to the nape of the neck and between the shoulders, and to keep it open by stimulating ointment, consisting of equal parts of emplastrum lyttæ and unguentum resinæ; he was also directed to continue the purgative mixture. He continued in the same state for the next two days; the delirium still continued, which was always of an *apprehensive character*, as if he feared that something was going to befal him, and he talked almost incessantly. I took great pains to ascertain whether the case were one of delirium tremens, but I was convinced that it was not, for the head was burning hot from the commencement, the skin was always hot and dry, the tongue was white and furred and dry, not covered with a creamy mucus, and I could observe, amidst all his violence, nothing that could properly be considered a tremulous motion. I therefore directed the antiphlogistic system to be continued, the blister in the back of the neck to be kept open, and cold applications to be kept constantly to the head.

July 15. He was rather more tranquil, but still raving, apprehensive, and incoherent. Bowels confined. He was directed to take half a drachm of compound jalap powder.

July 16. On this day he suddenly became worse; he was unusually quiet; the tongue became brown, cracked, and dry; the skin hot; he had great thirst; pulse was rapid and small. He was ordered to take the following: ℞ Antimon. potassio-tart. gr. j, sp. ætheris nitrici ʒij, liq. ammoniæ acetatis, et mist. camphoræ, āā ʒiij. Ft. mist., cujus sumat coch. ij magna 4tis horis.

July 17. He was rapidly sinking; the skin cold and covered with a clammy sweat; the tongue black; the teeth covered with sordes; pulse very feeble, almost imperceptible, very rapid. He died very tranquilly on the same day.

Post-Mortem Examination, Nineteen Hours after Death. Weather warm, but not sultry or oppressive. Present: Dr. Semple, Dr. Ballard, Mr. Burford Norman. The body was that of a thin, spare man; there was no particular appearance observed exteriorly in any part. The head did not appear congested; the eyes presented no unusual appearance.

Head. The scalp was natural and not congested. The skull was thin, and in many parts it was translucent. The two sides of the skull were unsymmetrical in a very marked degree, and the skull looked as if it had been subjected to lateral pressure, which had caused its walls to be compressed unequally. As an example of this want of symmetry, it was particularly observed that the part of the skull which, according to phrenologists, is placed over the organ of destructiveness, was prominent on the left side, and depressed on the right, while the right frontal region was prominent, and the left depressed. The dura mater was normal. The arachnoid membrane, covering the dura mater, was natural; that covering the brain was of rather firm consistence, but not remarkably thickened, and not stripped off with facility, but tearing with the effort. The pia mater was congested, and its small vessels were minutely injected in a ramiform manner. The veins and sinuses of the brain were prominent, but not much congested; there was a little air in some of the veins. There were no appearances of adhesion in any part of the arachnoid membrane; and there was no pus, or coagulable lymph, anywhere discernible. On removing the brain, about an ounce and a half of serum, tinged with blood, escaped into the cranial cavity. The whole of the brain, viewed generally, presented an injected appearance, but no part was especially so more than another. The arteries and nerves were healthy. The consistence of the brain, when felt externally, was of average firmness; and, when carefully examined in all directions by dissection, it was found to be of perfectly natural consistence throughout. There were some bloody points dispersed among the white matter, but certainly not more than are seen in brains which are considered healthy. The ventricles contained hardly any fluid, and these and all the other cavities and organs of the brain were found to be perfectly healthy, although most carefully examined by myself and by the able anatomists who assisted me in the dissection.

Chest. The heart and lungs were perfectly healthy.

Abdomen. All the abdominal organs were perfectly healthy.

Remarks. The above case affords matter for numerous, though unsatisfactory, reflexions. A young man in the prime of life is seized, without any known cause, with violent delirium; the mild treatment which he received at first, tends only to increase his disorder; restraint becomes absolutely necessary in order to protect himself and others from the effects of his own violence; he is treated by mild antiphlogistic remedies, but in a few days he rapidly sinks and dies; and after death no morbid appearance of any importance can be detected by the most careful examination. It will not be uninstructive to pass over, *seriatim*, some of the leading features of this very painful case.

Causes. No cause can be assigned for this attack, except hereditary predisposition. It appears that the father had been distinctly insane upon

at least two occasions, and that he had actually been under treatment at one period for a wound in the throat, inflicted on himself while labouring under suicidal mania. It also appears that the father was insane at the time when the subject of the present case was conceived; a circumstance, if it be true, which forms an important and curious fact in the pathogeny of insanity. The only indications of derangement of intellect in Henry Staples were some traces of sulkiness and moroseness in early life; but it appears that he was well educated, did not indulge his appetites or passions, and felt a presentiment of the mental disease which was to overwhelm him.

Symptoms. The symptoms were clearly those of acute suicidal mania, and he sought to gratify his propensity for self-destruction by any means in his power. It also appeared that he laboured under subacute cerebritis, from the great heat of the head, the hot dry skin, the thirst, and rapid pulse.

Diagnosis. From *ordinary mania*, the case was distinguished by the decided symptoms of inflammatory and febrile action. From *acute phrenitis* it was distinguished by the pulse being rapid and rather full, not hard and strong; by the absence of previous vomiting and other preliminary indications; by the absence of the staring blood-shot appearance of the eyes, and of intolerance of light, which denote the sthenic form of cerebral inflammation. From *meningitis* (although the symptoms of this disease are obscure and uncertain) it was pretty well distinguished by the absence of vomiting, of irregular outline of the pupillary aperture, of strabismus, of convulsions, and of coma; many or most of which symptoms usually accompany inflammation of the cerebral membranes, and the effusion consequent upon that disease. From *delirium tremens*, to which it bore some resemblance, it was very clearly discriminated by the previous history of the case; by the character of the delirium, which in delirium tremens is busy, rambling, and talkative, but in the present case was furious, violent, mischievous, and destructive; by the state of the head and skin, which in delirium tremens are cool and remarkably moist, but in the present case were uniformly hot and dry; and by the state of the tongue, which in delirium tremens is covered with a creamy moisture, but in the present case was dry and furred.

Treatment. The treatment was entirely founded upon the above diagnosis; the absence of symptoms denoting the sthenic form of encephalitis contraindicated the adoption of copious bleedings; while the hot and dry skin, and the dry and furred tongue, precluded the use of any form of opium. A middle course was therefore pursued; eight leeches were applied to the temples in order to moderate the inflammatory action which existed; a small quantity of calomel, amounting altogether to a scruple, given in divided doses, was administered; and the bowels were kept open by simple purgatives; and, after the antiphlogistic plan had been adopted to this extent, a blister was applied and kept open in the nape of the neck. Only very light diet was allowed, and the principal drink was water.

Morbid Anatomy. The pathology of this affection is exceedingly obscure; and, although it is allowable to suppose that vascular congestion may have existed during life, but had disappeared at or after death, yet it is quite certain that no traces of inflammatory disease, or

of any other morbid action, could be anywhere discovered. I do not pretend to assert that, in cases like the present, morbid appearances do not exist, but I am sure (and I write from a rather extensive experience) that in many instances it is very difficult to find them; and it is perhaps reserved for another age, and for more accurate and refined methods of investigation, to determine the nature of those subtle changes in the structure of the human brain, which derange the operations of the intellect, and temporarily or permanently deprive man of the godlike faculty of reason.

8, Torrington Square, August 1851.

OBSERVATIONS ON THE PATHOLOGY AND TREATMENT OF PAIN, ESPECIALLY IN FIBROUS AND FIBRO-SEROUS TEXTURES.

By JAMES KILGOUR, M.D.

The three following cases may prove interesting, from the analogy which existed between certain of the symptoms common to each; and more particularly from the circumstance, that pain was a prominent feature in all of them. They are arranged in chronological order.

Case 1. Charles George, a young man, aged 26, tall, and rather muscular in form, whose occupation was that of a farm-labourer, was first seen by me on the 17th January, 1849. At that time he presented the appearance of a person labouring under organic disease; his aspect was sallow, his figure bowed, his walk feeble, and the least exertion produced breathlessness and exhaustion. He stated that he had been ill since the preceding June; that his medical attendant had treated him for fever; and that, for a short time, his urine had been bloody. These were the only antecedent facts, connected with the history of the case, which I could rely upon as authentic.

He then complained of severe palpitation and breathlessness upon exertion, or upon attempting to lie down; taking food also aggravated these feelings, and caused a sense of fulness and distension. His pulse beat, upon the average, 115 in the minute; it was not irregular in any way, but extremely excitable. There was no heat of skin; but the urine was reported to be occasionally turbid; there was some thirst, and the tongue was white and slightly furred; the bowels were rather confined. There was no swelling of the extremities, nor œdema anywhere. A very careful examination of the chest, which was well shaped, revealed nothing unusual, except that the situation of the apex of the heart was rather more to the right than common. Pressure at the epigastrium caused uneasiness, but not pain at this time.

The treatment was generally calmative, and at the same time directed towards the relief of the dyspeptic symptoms. During its continuance, he passed a large round worm, and gradually improved so far as to be capable of some exertion, and of lying down in bed. He was discharged on the 19th of February, with a hope upon my part, and a belief upon his own, that he was upon the highway to recovery. These expectations were not destined, however, to be at once realised.

During the summer, his symptoms returned; and he again applied to me, on the 2nd August, in a worse condition than I had yet seen him. All his former ailments had returned upon him with increased force; and, in addition to them, he now complained of a fixed pain, felt most under the margin of the left ribs, and towards the back, ascending the spine; also of an occasional pain of a stabbing character, which seemed to pass from the situation of the apex of the heart towards the spine, and produced much distress and alarm. There was great tenderness upon pressure at the epigastrium, extending upwards, and towards the left; there was also considerable epigastric pulsation, but no great tenseness of the recti muscles. The pulse, as before, was regular; but the heart's apex beat still more to the right than formerly, and could now be felt most distinctly nearly midway between the nipple and the left edge of the sternum, and upon the lower, instead of the upper, border of the sixth rib. The cause of this displacement was mysterious, not being affirmed by any physical sign, though repeated examinations were carefully made, with a view to its discovery. The patient also complained of being occasionally "caught" (as he expressed it) on the left side of his neck, so as to be unable to move it while the spasm lasted. Digestion was painfully performed, with much tympanitic distension of the stomach and acid eructation, and a pinching pain in the abdomen was sometimes experienced. The urine was at this time examined, and found of sp. gr. 1·009, colour pale, odour fetid, and reaction alkaline.

Leeching and other modes of medication were attempted, but without relief; and, after a short trial of these remedies, dispairing of any advantage from medical advice, the patient gave himself over, on the 20th August, to the care of nature, and, as it turned out, his *vis medicatrix* proved sufficient for the emergency. About two months subsequent to this date, I was much surprised to meet the patient in the street, walking nearly erect, and wonderfully improved in appearance. He informed me that, shortly after he had left my care, he was alarmed by coughing up a quantity of yellow matter tinged with blood. This produced, for the moment, alarming faintness, but was at the same time accompanied by great relief to the pain and palpitation. He also said that, every day since then, he had been in the habit of coughing up a certain portion of the same matter, but that latterly it had diminished in quantity, and had become thinner and nearly colourless. I requested him to call upon me, with a view to the examination of his chest, but he did not comply with my wishes.

Remarks. In the matter coughed up, we have the elucidation of a case which lasted for fourteen months, and baffled the penetration and perseverance of many medical observers. An internal inflammation, whose activity had many varying degrees of intensity at different times, and which ultimately terminated in abscess, had given rise to a majority of the various symptoms which had distressed the patient, and puzzled the physician.

It only now remains to discuss the probable situation of the tumour. In doing so, a reference must be made to the symptoms, both individually and collectively. The symptom which, by itself, is perhaps of the most importance to our present object, is the altered position of the heart; a change, which, in the circumstances, must have occurred

from mechanical causes, and which affords proof positive that a part, at least, of the disease lay within the thorax. Next, we have the pain, the most prominent feature of the malady, and which, from its seat and course, must have resided chiefly in the vagus and phrenic nerves, and also, by implication, in the accessory, as was proved by the spasm of the left sterno-mastoid muscle. Then we have the palpitation and breathlessness; the latter of which symptoms was probably caused by the disordered function of the vagus; while the former was most likely due in part to the mechanical violence done to the heart, as well as to its direct participation in the inflammatory process through the pericardium. Last, among the more important signs, we have the tympanitic distension of the stomach, and the excess of acid generated there; both being conditions which are often induced by pressure, though they may certainly arise from other causes. The abscess must have occupied a position partly, if not wholly, within the thorax; and there is a probability, from the existence of the last-mentioned symptom, that it exercised some degree of pressure upon the stomach. We may therefore conclude, with some confidence, that the septum between the thorax and abdomen was probably the seat of this inflammation and abscess; and we are the rather led to this conjecture, from the knowledge that certain parts of the diaphragm are liable to such accidents, though the pus more generally seeks an outlet at the epigastrium or umbilicus, than upwards into the cavity of the chest. Anatomical reasons also favour this view, which explains at once the affection of the heart, the stomach, and the lungs, all of which were more involved by sympathy than by direct participation in the morbid process. Should we speculate upon the cause of the primary inflammation, it would be proper to recal the incident of the passage of the worm and the bloody urine, and to mention that two or three instances are on record, of worms having made their way outwards through some of the hollow viscera, and of having excited inflammation and suppuration in their progress. Without denying the possibility of such an origin for the case in point, I am rather disinclined to allow the claims of the worm, which should otherwise have appeared in person to support them. As regards the alkalinity of the urine mentioned above, it is perhaps worthy of mention, that Dr. Beneke, of the German Hospital at Dalston, has found the urine to contain an undue proportion of phosphates in many cases of emaciation, and when pus has been formed after acute inflammation.

Case II. Jane Bufton, a widow, aged 58, was seen for the first time on the 16th January, 1850. At this period, she had been ill for four months, and had been treated for fever, upon a strict antiphlogistic plan. In person she was stout and well formed, but her countenance was sallow, and expressive of anxiety, and she stooped forward, not from weakness, but with a view to relief from pain. She stated that her complaint had begun with cough and spitting; and that at first she had little pain, which then bore the character of a stitch, and was principally confined to the left side. Subsequently, however, it became altered in situation, and took the nature of a dead aching, and finally of a tearing pain, occurring in paroxysms, which prevented her from lying down in bed. This was pretty much the state of matters

when I saw her. She represented the pain at that time as agonising, and as totally preventing continued sleep; it extended from the apex of the heart backwards to the spine, and upwards to the neck, also along the left arm, and occasionally invaded the lower extremity of the same side. A paroxysm was easily induced by cold air, mental emotion, or any cause of sudden hurry to the circulation. The pulse was full and regular, and beat 72 in the minute; palpitation was not complained of; nor was pain excited by pressure at the epigastrium. There was some cough, accompanied by a tough mucous expectoration. The appetite was indifferent, the bowels regular, and the tongue white. A careful examination of the chest, by percussion and auscultation, discovered nothing but an apparently sound condition of the heart, lungs, and their investing membranes. A great amelioration was temporarily effected in this case by the use of iron, in combination with narcotics and antispasmodics. But this improvement seemed to be only the prelude to an attack of greater severity, which occurred in the beginning of April, during the course of which the pulse rose to 90; there was pain upon pressure at the epigastrium; and there was also difficulty and pain in deglutition. A large number of leeches were applied over the cardiac region with very great relief; and, in the report of the 18th April, upon which day I ceased my attendance, it is stated that she was not free from pain, particularly at night, but could lie down; that she slept pretty well; and that her general condition was much improved. As I have not been applied to since that date, it is probable that this patient has continued pretty well up to this time.

Remarks. In this case, from the nature of the early treatment, we may presume the pain to have been of an inflammatory kind at first, as it certainly was during the last attack. But, during its middle period, this did not seem to be the case, whether we look at the symptoms or at the result of treatment. Upon what, then, did the pain depend at that time? Are we to suppose that the impression made on the nerves of the affected part, during the first inflammation, had so altered their structure, or impaired their function, as to render them incapable of conveying healthy sensations, as is sometimes the case after injuries from external violence, when the parts have apparently returned to their normal condition, but when pain is still felt in their nerves? or are we to fancy that a smouldering inflammation lurked in some of the tissues, and supplied the source of irritation? Either opinion might be maintained by argument, and would certainly afford the ground for an interesting inquiry; which, however, I must decline at present, reserving a few remarks upon pain for the end of this paper.

Case iii. Elizabeth Black, aged 48, was seen on the 17th July, 1850. She stated that she had been ill for four months. In person she was above the middle height, spare, but well formed; her complexion was sallow, and the expression of her countenance was anxious. She complained of a fixed pain of great severity, passing from the apex of the heart backwards to the spine and between the shoulders, the same being aggravated by a long breath, or by taking food into the stomach. Exertion produced breathlessness and palpitation, and there was slight cough. The pulse was 84, full and rather hard, but quite regular.

Upon examining the chest, the ribs in front of the heart were found to project a little, and the left ventricle to be somewhat hypertrophied; in other respects, the heart was normal. The lungs and pleura gave no evidence of being otherwise than natural, except at a point below the heart's apex, and a little to its left, where some resonance of voice was heard, with sibilant and creaking rhonchi at the end of expiration. Percussion, however, failed to elicit any appreciable dulness at this spot. Venesection to twelve ounces was performed with remarkable relief to the pain, which from this time occupied no prominent place among the symptoms, and was only complained of when a deep inspiration was made. A slight cough, with mucous expectoration, remained, but the resonance entirely disappeared, and the râles, which were very circumscribed, became moist instead of dry. The treatment lasted from the 17th to the 26th January, when the patient was discharged.

General Observations. The cases which I have just described, or cases analogous to them in respect of their principal symptoms, might easily have been multiplied, had it been necessary to adduce additional testimony, to prove that the seat of pain complained of in these instances is a very common one. Abernethy used to demonstrate to his dyspeptic patients, in a manner not less unpleasant than convincing, that they could not bear pressure at the epigastrium; for the frequency of pain or tenderness in this situation had not escaped the notice of that acute and experienced observer. The fact that pain does occur here so frequently, is perhaps not to be wondered at, when we reflect that, wherever the terminal distribution of nerves occurs, there we find great sensibility. This has been remarked by M. Valleix, in his treatise upon neuralgic affections; and seems to be an arrangement by which an alarm of danger may be at once communicated to the system, and the more important organs protected from its action. But nature in this, as in all her plans, has aimed rather at the accomplishment of one paramount object, than at complete perfection in all; and we can therefore easily see, that in sensibility we possess a guardian of such vigilant excitability, that, once aroused, it is often difficult, and in some cases impossible, to stifle its warning voice. It is noticeable, that in the first of the three cases recorded, the pain was certainly, and in the other two presumably, of inflammatory origin; and that the tissue principally affected was the same in each—the fibrous. Upon these points some speculative remarks may be hazarded: first, as to the modes in which nerves are primarily affected with pain; and secondly, as to the coincidence of some painful affections occurring in connexion with fibrous tissue.

Modes in which the Nerves are primarily affected with Pain. From this inquiry must be excluded the cases of pain arising from external injury, or from reflex action; because it would be premature, with our present knowledge of the action of the nerves, to attempt any explanation of their altered function during the occurrence of pain. We must therefore limit the field of our conjecture; and, with a view to practical ends, inquire how healthy nerves may take on abnormal action. For one class of cases it may suffice to say, in the mean time, that the nerves supplying tissues, in which an unhealthy process is

going on, become involved in that action; and we are prepared to expect that, in such circumstances, some change of function may occur. But, in some instances, nerves become painfully affected by certain influences not inducing appreciable structural change; and the question is, whether in these cases such influences act for the first time otherwise than in the way of inducing inflammation. By way of example, moisture and cold produce tic; but is not the first attack of that complaint always of an inflammatory nature, when the nerve was healthy prior to its exposure to the exciting cause? Again, a *materies morbi* in the blood may stand in the place of cold and moisture; and what is the result? An attack of acute rheumatism in the first instance; and, most likely, a succession of chronic attacks for the future. If this reasoning be correct, it follows that healthy structures are incapable of morbid action, which is not the general belief as to nerves. A practical deduction would also follow, that the treatment in such cases should be, to use an old-fashioned term, antiphlogistic. Pain would thus come to be considered the expression of an altered structure, rather than of an altered function; and, if we argue from the analogy of known causes of pain, such as pressure, we may presume that some obstruction to the progress of the legitimate influence of the affected nerves exists, which obstacle we can hardly imagine unconnected with a physical change. From the same premises it would follow that, in reflex pain, the nerve affected must be itself healthy; otherwise, how could it convey correctly even a wrong impression? The singularity in these cases is the point at which the morbid sensation becomes developed, and which, though not yet reduced under a fixed law, is perhaps to be explained by the general remark of M. Valleix, above alluded to, respecting the sensibility of nerves towards their extremities.

We have now to apply these observations to the cases described, and to others analogous to them, where pain at the præcordial region is a prominent symptom. We have seen that it is not excited in healthy nerves, except by mechanical means, or by some change occurring in the surrounding tissues, or by special influences producing inflammatory action; and therefore, in the absence of the first and the last of these cases, we have only to inquire, what is the tissue affected? to which the nature of the pain often affords an answer. We are then to presume, that some change is going on in one or more of the organs which adjoin the seat of the pain. We are not to believe that a functional derangement of their nerves exists, at least if the case be at all recent; but, proceeding upon the first supposition, we must endeavour to discover the kind of change which is being effected, more particularly if it be of an inflammatory nature. If this point be made out, it is of little practical import, in the outset of the treatment, whether the mischief is caused by the liver or by the stomach, or whether it is due to neither. The former organ has much to answer for in the way of exciting diaphragmatic and even pericardial inflammation; though it would seem, from some late researches of Dr. John Taylor, that a faulty condition of the kidney is even more productive of pericarditis than rheumatism itself. When, then, the great depurating organs are at fault, certain tissues become affected; this brings us to the second subject of speculation.

Connexion of certain tissues with some painful disorders. The fibrous, fibro-serous, or fibro-cellular tissues seem peculiarly obnoxious to the evil influences of bad blood and bad climate. And, as if evil communications corrupt good manners in this as in other cases, these membranes involve the neighbouring nerves in the same disturbance, the consequence of which is, that their affections are very painful, often tedious, and generally liable to recur. For it seems to be a law of nervous matter, that, if once impressed with any peculiar action, it manifests a tendency to maintain the same. This, perhaps, is only a consequence of that property in such matter to resist change, by which our characters, aptitudes, and repugnances, remain the same from the moment of their full development until their extinction.

Accepting as a fact that fibrous, fibro-serous, and fibro-cellular tissues are extremely susceptible of anormal nutrition in some shape, we may recal to mind certain neuralgic phenomena, which perhaps may be independent of any source beyond the nerve affected, but which nevertheless deserve notice, on account of their propinquity to these structures. Of this kind are sciatica, lumbago, tic, pleurodynia, certain forms of headache, of rheumatism, of gout, and also some painful affections of the abdomen occurring in the course of Bright's disease, and sometimes terminating in ascites. These complaints, for the most part, own a humoral or an atmospheric origin, or one depending upon the joint influence of both; and, as their causes are known to affect fibrous tissues in preference to any other, it is only natural to presume some connexion between them and the nerves to which the mischief is referred. I often used to reflect upon the singularity of the fact, that, in facial neuralgia, the nerve did not become affected until its emergence from its bony tunnel; but this view of the case clears up that difficulty, and is wonderfully confirmed by the kind of treatment which is found most useful in such disorders, consisting of those remedies which tend to improve the condition of the blood, with other means directed to the same end.

Of the reason why these tissues should be affected under such influences, I can offer no explanation, unless we accept as such what has been often advanced before—that a lesser vital organization possesses a smaller power of resistance. Some peculiarity connected with the circulation of these parts may, as in the case of articular cartilages, perhaps enable us to make an advance towards discovery; but, in the meantime, we must rest satisfied with the fact, or with the sequence of facts, as we know them. A knowledge of them affords us a valuable means of diagnosis and aid to treatment, besides forming the starting ground for the philosophy of the question. Of course there is a great difference in the sensibility to pain in various individuals. Hunter says that animals with fair skin and hair are more susceptible of cold, as also of pain, than the dark. This is well known in the army, where we find that the power of bearing violence committed on the body is in proportion to the darkness of the individual. The late Sir Robert Peel was a striking instance of this peculiarity; and the truth of Hunter's remark is further borne out by the fact, that many fair and scrofulous individuals have great quickness of feeling and mental susceptibility. The structure of the nervous system must thus have a strong influence in determining the character of the individual,

which at one time was judged of from the form of the head alone, as indeed it very generally is at this day. The variety of the kinds of pain which may be excited in the same nerves is also curious, yet not more so than the numerous and contrary sensations which we experience through the same medium in a state of health, and by which we are enabled to characterise the properties of bodies, and to experience a gratification of many descriptions and degrees.

In this apparent complexity of function enjoyed by the cerebro-spinal nerves, does the sympathetic or its branches take any part? Dr. Seller, of the Royal Infirmary of Edinburgh, attributes to the branches of this nerve the pain experienced in headache; and Professor Hughes Bennett states that through them the pain of colic, gall stones, etc., is experienced; and it is certain that mental emotion influences powerfully their organic action. But, after all, the question at present has no great pathological interest; for should we, by an unheard-of accuracy in diagnosis, attain to a knowledge of the particular fibres involved in a case of neuralgia, we have no treatment wherewith to follow up such a transcendental discovery. It is time, also, that this vagrant discussion should terminate, though the subject and its collateral topics are well nigh inexhaustible. Yet one more remark is necessary as bearing upon the general conclusion; which is, that in very many cases, when the nervous matter is alone involved, no pain is felt, the only visible result being a cessation or modification of its action; and yet intense pain may be excited in a nerve by its being put upon the stretch, as by a spiculum of bone, or by a tumour. In these cases, to be sure, the pain is usually very intermittent; yet all pain is more or less so, for it is not conceivable that a nerve should have the power of maintaining a continuous action for an unlimited period.

The following are the inferences at which I arrive.

I. Setting aside mechanical agency of all kinds and reflex action, pain is incurred in healthy nerves by their participating or becoming involved in abnormal processes occurring in the tissues to which they are distributed, by which, if the process be long continued or intense, some change takes place, rendering them liable to be affected with pain upon the recurrence of a small amount of the original exciting cause, and without the concurrents which accompanied their first seizure.

II. It is doubtful whether the nerve alone suffers in such secondary or succeeding attacks, or whether the surrounding tissues are likewise affected.

III. Such incidents are most frequent when the structures concerned partake of the nature of fibrous tissue.

IV. Loss of tone, or diminished power of resistance, in the parts invaded, is frequently permanent.

V. This atony is most frequently local in its origin and extent.

VI. In such instances, it may arise from change of structure, inappreciable to our means of observation.

VII. If these premises are correct, it follows that, when pain occurs in the situations referred to, and lasts for any time, the treatment should be directed to favour the subsidence of the morbid action, as well as to neutralise the exciting cause; and that, for the first indication, the abstraction of blood is probably the most effective means.

VIII. When the tissues have lost their powers of reaction, and yield at once to a depressing influence, a tonic and alterative or depurating plan of treatment is to be followed.

IX. The vigour of the treatment is generally to be proportionate to the importance of the parts or organs concerned, and to the strength of the constitution.

Here it is assumed that pain is a certain index of abnormal nutrition on the one hand, and of altered function or structure upon the other; and, as the second condition is caused by the first, we must infer that if the first be warded off or mitigated, its consequences will not follow, or only in a minor degree; and if pain be the certain index of inflammatory action in such cases, and it be proved by experience that blood-letting, local or general, has the power of assuaging that pain, we can only suppose, at least in cases where tumefaction has not occurred, that it so acts by allaying the abnormal action.

The conclusions drawn from this short train of reasoning are opposed by a remarkable statement of Dr. Dietl of Vienna, as to the efficacy of blood-letting in pneumonia, which was noticed in the *Edinburgh Monthly Journal* for January 1851, and which is to the effect that, while 85 cases treated by bleeding alone gave a mortality of 20·4 per cent., 106 by powerful doses of tartar emetic alone 20·7 per cent., 189, treated by dietetic means only, gave the diminished per-centage of 7·4. Whether this statement be free from error or from fallacy, I am not enabled to declare; but the results are curious, and appear to be in contradiction to nature itself, which seeks relief in this disease by the effusion of blood, sometimes occurring very copiously, and seldom without apparent advantage. In other complaints, the same mode of relief occurs naturally; and if the healing art is to be founded upon an observance of the laws and operations of nature, we have certainly the sanction of the highest authority for continuing the practice of blood-letting, Dr Dietl's tables to the contrary notwithstanding. If the preceding remarks be correct, it must be of the utmost consequence to preserve the nerves of the inflamed part from permanent injury; and this consideration alone, were the relief to present suffering of no account, should preserve every honest pathologist from the venal paths of a do-nothing quackery.

Halifax, July 15th, 1851.

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3. Letters to a Candid Inquirer on Animal Magnetism. By William Gregory, M.D., F.R.S.E. 8vo., pp. 528. London: 1851.
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Mr. Atkinson, at the commencement of his work, cites, among other mottoes, the observation of Sir Humphrey Davy, "that the physical inquirer is seldom disposed to assert confidently on any abstruse subjects belonging to the order of natural things, and still less so on those relating to the more mysterious relations of moral events, and intellectual natures". We wish Mr. Atkinson had laid this pithy sentence rather more to heart; for more confident assertions on abstruse subjects it was never our fortune to read. We look in vain in his lucubrations for the caution and reserve so wisely inculcated by his great authority; and we lay down his book with the conviction, that he has no real knowledge of the state of mind which he praises in Sir Humphrey Davy. It is evident that the mind must have a certain grandeur and amplitude before it can perceive its own littleness, and that the mental sight must go forth out of darkness, before it can be dazzled with the light of day. Confidence in its own decisions, and in its own strength, belongs to the youth of nations and to the infancy of mind; but modesty and hesitation surround those, whose more matured intelligence has recognised the narrow boundaries of human thought.

Mr. Atkinson has no such hesitation and reserve; he passes before him the tremendous problems of existence and futurity, and, without fear, assigns to them their solutions. A mere point of earth, the veriest drop in the ocean, he cries aloud that his sight can embrace the universe, and penetrate the wonders of the watery expanse. Unable to see the vivid light before which the prophet veiled his face, he creates his idol, though the truth is on every side of him, as the Israelites made their golden calf, even while the glory of the Godhead overshadowed the Mount.

We owe this joint publication of Mr. Atkinson and Miss Martineau to the circumstance that two minds, similarly and singularly constituted, have come into contact. The mind of the lady, indeed, seems to have been subjugated by the stronger volition of her masculine coadjutor; but it would have been impossible that this should have been so thoroughly effected, had not the path been made easy by the original conformity between them in point of reasoning power, and in the marked deficiencies of their mental constitutions. Dr. Bushnan has pointed out with great force the nature of this defect. Mr. Atkinson seems to have no perception of that great class of intuitive truths, which the Scotch metaphysicians, in opposition to Locke and Hume, have in the latest time so well examined, which form the basis of the philosophy of Kant, which are discussed with wonderful precision in the pages of Cousin, but which are to be found also in what remains to us of the

wisdom of Socrates, and of the vast speculations of Plato. There is little doubt, but that this highest power of the mind, by which alone we are definitely separated from brutes, is more developed in some minds than others, and, taking the aggregate, in some nations than others. The Germans and the Scotch possess it more than either the English or the French, and it is probable, that the Greeks were more largely endowed with it than the Romans, and the Jews than any nation of the earth. Among these "necessary truths" is included the idea of "cause", as distinct altogether from the phenomena with which it may be involved. Phenomena, it is true, may first give us the idea of cause, and are, as Cousin expresses it, its chronological antecedents; but, once seized by the mind, the idea of cause becomes detached altogether from its antecedents, and is perceived to be an independent and necessary truth. Two phenomena succeeding each other may give the idea of cause; but, once given, the mind abstracts it from the narrow origin from which, as far as our minds are concerned, it sprang, and it becomes illimitable and boundless. Of such an abstraction as this, Mr. Atkinson seems perfectly unconscious; he never separates causation from the idea of causal connexion between phenomena, and it is indeed probable that he cannot rise higher than the limited, and therefore erroneous, dogma of Brown, that causation is nothing more than invariable antecedence. Besides this inherent mental defect, Mr. Atkinson unfortunately presents another, which obviously arises from defective training, viz., a deficiency of logical power. This is evident in almost every page, and is so marked, that Dr. Bushnan has often controverted his positions, by logical induction from his own premises. With this untrained reasoning faculty, Mr. Atkinson has attempted to work out problems for himself, and it is clear that his knowledge of what the reasoning powers of other men have taught us of these problems is very limited. Hence, on an original want of learning and of information, he has brought to bear a defective instrument, and the result has been a strange mixture of the commonplace and the erroneous.

We wish we could stop here, and charge Mr. Atkinson only with intellectual defects. But, we are afraid, sins yet more heinous must be imputed to him. We will give him full credit for being sincere and honest in his belief of the marvels of clairvoyance and prevision, but we deny that he has truthfully treated the subjects he proposed to himself, or rather, which Miss Martineau proposed to him. Everything which might tell against him has been avoided, to an extent which warrants us in calling it a *suppressio veri*. His treatment of Lord Bacon is an example of this. He has culled carefully from the writings of Bacon the expressions which support his views, while other passages are as carefully excluded. In this manner he ingeniously represents himself as a sort of commentator on Bacon, and represents as an unbeliever and an atheist, professing a sham religion, in deference to the ignorance and prejudices of his contemporaries, the man who has written, that he would "rather believe all the fables of the Talmud, than that this universal frame is without a mind"—the man who prayed that "from the unlocking of the gates of sense, and the kindling of greater natural light, nothing of incredulity or intellectual night might arise in our minds towards divine mysteries".

We may then assert that, from original defect of mind, from want of education, and, perhaps, even from want of moral integrity, Mr. Atkinson is the last person whose opinions on *Man's Nature and Development* we should be disposed to adopt.

Let us, however, pass to the book itself. We object to it strongly on several grounds. We might take exception to it as a mesmeric performance, and examine into the wonders so unhesitatingly asserted. Or we might condemn its tone, and the manner in which it speaks of things sacred and dear to most men, and which on this ground, if on no other, are entitled to tender and respectful treatment. But of far more consequence is it to us, to exa-

mine the conclusions arrived at in it, concerning matters of aith and usual credence. Dr. Bushnan has adopted the same view, and, in his most able analysis of Mr. Atkinson's doctrines, has passed over with little notice the mesmeric absurdities, and the offensive manner, to fix his attention on the scientific, or rather, the pseudo-scientific dogmas, proclaimed in the work. It is, however, no easy matter to collect Mr. Atkinson's opinions; they are enunciated often enough it is true, but so obscurely, and with so little method, that it requires care to understand them thoroughly. But the following summary of them is, we believe, quite correct. Mr. Atkinson believes—

"That the matter which exists in space has had no beginning, and is to have no end; that it exists from eternity to eternity; that the arrangements of the universe, in all their gigantic extent, are the result of the laws of nature; that there is no design, and no chance in the order of things; that plants and animals at particular epochs arise spontaneously, and continue for a time to exhibit the phenomena peculiar to the organised departments of nature, in obedience to certain fixed laws of matter; that mind is the action of the brain; that there is no God, no hereafter for man, no liberty of action, no sin, no responsibility; that phrenology and mesmerism afford the means by which one man may study the phenomena of another's mind as a part of nature; that distance does not prevent one man from seeing what passes in another's mind; that there is ground of hope for the improvement of the moral world in the fear inspired by mesmerism; that the inmost thoughts of any individual may be at any time subjected to the scrutiny of another; lastly, that the foretelling future events is a power which exists in nature." (*Bushnan*, p. 15.)

Mr. Atkinson's opinions being thus reduced to an intelligible form, it is at once evident, that the dogma about the eternity of matter is simply the old atheistical and material assumption, which we really hoped had disappeared for ever. It is a complete assumption, to assert that matter can never have been created, and can never be annihilated. That matter is eternal, is not a necessary and intuitive truth, and not being so, no logic can ever prove it. On the other hand, it is an intuitive truth, that, in the idea of causality, the mind sees force and power, which is independent of matter, and, though first suggested by it, is not necessarily connected with it; and it can be easily observed by any one, that this idea of force and power is an ultimate one, mysterious and obscure, as no doubt it must be to a being of finite intelligence, but still one in which the mind rests complacently, and seeks no farther; whereas, when any one speaks of matter, the mind, in virtue of its own inherent necessity, seeks beyond the matter for the force which called it into being, and which maintains it in action. It is the same necessity which led the philosopher of old to question the materialist dogma of his time with the demand,—"and Chaos, whence?" When any one speaks of the eternity of matter, the reason of each person penetrates deeper still, and asks—"but matter, whence?" It is sufficient answer to Mr. Atkinson's fundamental position that matter is eternal, to reply that such an assumption is unsatisfactory to every educated mind. Dr. Bushnan sums up his argument on this head in these eloquent terms.

"If matter be eternal, there can be no God; there is, there cannot be any existence, whether intelligent or non-intelligent, not subject to the properties and laws of matter. If matter be eternal, everything which happens, and everything which is produced, must be the result of necessity,—that is, the consequence of the operation of the original laws and properties of matter. And therefore, if matter be eternal, everything must arise out of what is strictly called chance—that is, by the sole operation of such properties and laws of matter as the circumstances of each particular case bring into play. It seems possible, that there may be individual minds so anomalously constituted, as to feel no difficulty in such views. But it is certain that such is not the natural sound constitution of the mind of man. For, if

matter be eternal, there cannot be any power in the universe ; everything which exists, and everything which occurs, must originate in the various affections of the atoms and masses which compose the material universe. Again, if matter be eternal, there cannot be any such thing as a true cause in Nature, as everything termed a cause under this assumption, can be nothing more than the expression for the law under which any event has occurred. *And therefore, under the assumption that matter is eternal, the absurd conclusion follows, that the notion of power, and the notion of cause, in the sense in which these notions are intuitively apprehended by the mind of man, are deceptions imposed upon him by the constitution of his nature.*" (*Bushnan*, p. 164.)

We have already expressed our belief that Mr. Atkinson belongs to that class of persons, happily very small, who are deficient in the power of recognising intuitive truths. This is proved by the contentment with which he rests in the assumption of the eternity of matter; but it is still more evident in the manner in which he uses the terms *cause*, *law*, *chance*, and *design*. Mr. Atkinson's second position is, as we have seen, that the arrangements of the universe are the result of the laws of nature, that is, of the action of the properties of matter which it originally and necessarily possessed. By virtue of these properties, it is supposed that matter changes, that elements unite, that organisation declares itself, that life appears, and, finally, that reason comes to light, and is able to discover how, and in obedience to what blind forces, it has been born. Now the term "*law*", as applied to reactions of matter upon itself, is evidently simply a convenient mode of saying, that phenomena assume a particular relation to each other, which relation is determined from observation. For example, we say it is a law that bodies subjected to heat shall undergo a proportionate expansion ; which is evidently merely another mode of saying that, in our experience, bodies expand when heat is applied. But as every one of these so-called "laws" expresses nothing more than the sequence of phenomena, there is nothing about it which is necessary and inevitable. The law merely implies, that, as such phenomena have assumed so often such a relation, they will probably assume it again. And the probability that they will so assume it increases with every fresh observation, which shows that they have again so assumed it. But the highest degree of evidence in favour of the constancy of such a law, is one merely of probability; and the human mind can evidently never attain to the certainty that a certain succession of phenomena is constant, since infinity alone can know that there is no possible exception. In fact, even now, many of our so-called laws are coupled with their exceptions, as in the example above given, where it is customary to say, that the expansion of water below a certain temperature, or the contraction of clay above it, are exceptions to the law that bodies expand by heat. Consequently, if Mr. Atkinson asserts that it is a law that matter shall be always active, and must always give rise to certain effects, it can at once be affirmed that this is a mere hypothesis, and that we have no right to affirm that matter cannot be perfectly quiescent. We differ here from Dr. Bushnan in believing, that in the so-called "law of gravitation", we do no more than affirm the existence of a force which attracts bodies inversely as the squares of their distances ; and although the highest generalisation has been given to this law, it is evident, that, in all other similar cases, its universality and constancy must be to us a matter of probability, never of absolute certainty.

It follows, then, that when Mr. Atkinson speaks of a necessary law, that is, of an inevitable necessity that matter shall act in a certain way, he is affirming what the reason of every one rejects; since an inability to pronounce on the universality of anything is a necessary result of the very condition of finite beings. Probability, as Butler remarks, "is the very guide of life", and our so-called "laws" are merely the expression of its greatest amount. Thus, by using the term "law", we do not in the least advance

ourselves, when we seek to solve the mysteries of creation ; but, on the contrary, we impose on ourselves a word which literally means nothing, or, according to the sense in which it is taken, implies an error.

There is no doubt that, owing to a want of precision in thought and language, many persons, in speaking of "law", are in reality referring to "cause". In using the expression that a certain series of events is governed by its own law, many persons simply express their belief that such series cannot originate of itself, but must be traced back to some cause, and that the successive changes which have preceded the effect they have before them, can be indicated with more or less probability. The idea of cause is, as we have already said, intuitively suggested in all actions of matter ; and the sequence of one phenomenon to another develops in the mind both the notion of causal connexion between them, and of absolute causation in general. And, even if it should be afterwards discovered that the phenomena in question were really not connected, still the abstract idea of causation remains. But, as it is evident that the invariable sequence of phenomena, and therefore their causal relation, cannot be absolutely proved, it follows that there never can be anything more than a greater or less probability that there is such a causal relation between them, and, consequently, in the last analysis, the only permanent idea of cause is the abstract one which can be detached altogether from phenomena.

In speaking of the "eternal and immutable laws of the universe", Mr. Atkinson has therefore either been making use of meaningless terms, or he has confounded the idea of cause with law. It is, indeed, evident that he has really been impelled beyond the point at which he had endeavoured to stop, and has admitted, behind his so-called "immutable laws", some force or power calling them into action. Thus he writes—"We know nothing fundamental of nature, nor can we conceive anything of the nature of the primary cause" (p. 7). This is quite true ; but it is no less true that we must admit that there is a primary cause, and Mr. Atkinson has done so in this very passage. Yet, as Dr. Bushnan has very clearly pointed out, if we adhere strictly to Mr. Atkinson's system, "there is no room for the term cause in any other sense than is synonymous with law".

The same obscurity and uncertainty are found in Mr. Atkinson's notions of chance and design. Mr. Atkinson says there is no chance, and therefore no design, in nature. But, as Dr. Bushnan remarks, "the equivalent of the proposition, that there is no such thing as chance, is simply, that anything which happens has a cause ; while the meaning of design is, the direction of known causes in such a manner that they shall produce a previously-conceived effect. What kind of logic is this ? Every event must have a cause, therefore causes cannot be so directed as to produce a previously conceived effect ! The proposition that nothing happens by chance, does not in the least interfere with the possibility of the conception of design". (*Bushnan*, p. 70.) In fact, there is no such thing as chance, and all that men mean by the word is, as Dr. Bushnan remarks, that a chance event is one which had not a preconceived purpose. When a man uses the common expression, that it chanced so and so, he means that, independently of his volition and purpose, or of that of other people, an event occurred which was not foreseen, because the causes producing it were not recognised by him. Dr. Bushnan's illustration is a very good one : "when a person shakes the dice-box and throws sixes, no one doubts that, if he could repeat exactly the same series of acts over and over, he would throw sixes as many times, and the event is said to occur by chance ; not because it is believed that it is not produced by a definite series of efficient causes, but because any attempt to control or direct these is abandoned as impracticable" (p. 74). When Mr. Atkinson speaks of "chance excluding laws", it is simply, and by his own showing, nonsense, as laws cannot be affected by what does not exist. And further, as chance means, if it means anything, that events occur without a preconceived purpose to

be gained by them, therefore, as Mr. Atkinson states that events never occur by chance, that is, without a preconceived purpose, he actually affirms that every event has a preconceived purpose, or, in other words, occurs from design. Instead of saying, therefore, there is no chance, and therefore no design, the proper reading of Mr. Atkinson's opinion should be, there is no chance, and therefore there must be design. But if, abandoning this ground, Mr. Atkinson's meaning be taken to be that there is no design, because causes act by necessity, and results cannot be other than they are, although they cannot be foreseen, we must again repeat our assertion, that this is an unjustifiable assumption of what cannot be proved, but which is opposed by all reasoning which men can bring to bear on it. For this doctrine of necessity can only be founded on the other dogma of the self-existence of the material world, and we have already exposed the very insufficient grounds any one can have for an assumption so monstrous.

Acting upon his hypothetical positions of the eternity of matter and the necessary action of its so-called laws, Mr. Atkinson proceeds to arrange his other articles of belief in accordance with them. As everything occurs from "necessity" (that is, some blind inherent force, which is infinitely more incomprehensible to us than the intuitive conception of an infinite and omnipotent and all-intelligent cause), there can of course be nothing like freedom of action. A concurrence of atoms makes man what he is, good or evil (as we ignorantly term it), wise or ignorant, an angel or a demon. Responsibility ceases, and, with it, rewards and punishments. What we do we do, not of ourselves, but because it was originally in the nature of things that we should perform that action and no other. This shallow doctrine, propounded over and over again by those who perplex themselves with things above them, and who yet neglect the evidence which lies close at hand, needs no refutation. Within ourselves we bear the witness to the freedom of our own will; and within ourselves, also, we too often hear the judge which tells us that we have chosen the broad path, when we should have taken the narrow one. "Man's free will", says Dr. Bushnan, "cannot be established by reasoning; it is a fact in his mental constitution. . . . . All that Mr. Atkinson can set against the universal belief of men, as to the fact of their liberty of action, is the double assumption that mind is matter, and matter eternal." (pp. 77-81.)

A curious instance of the extraordinary absence of logical power in Mr. Atkinson's mind presents itself in connexion with this subject. He has, as we have seen, denied the existence of a superintending moral ruler, of freedom of action, and, consequently, of responsibility, and right and wrong. No one could then be possibly prepared for the following discovery.

"The knowledge which mesmerism gives of the influence of body on body, and, consequently, of mind on mind, will bring about a morality we have not yet dreamed of. And who shall disguise his nature and his acts from the *clairvoyant* eye of some one who is observing our actions and most secret thoughts, so that our whole character and history may be read off at any moment? Few have the faintest idea of the influence these great truths will have upon the morals of men." (*Atkinson*, p. 280.)

How, we would ask Mr. Atkinson, can actions arising from necessity be altered by the influence of the clairvoyant eye? It is evident that liberty of action is here assumed; that a man is supposed to do one thing rather than another, because he knows that his conduct is watched. And, more than this, the existence of a moral code is fully admitted; else how would the person watched know that he ought to act in one way rather than another? Pushed to their legitimate conclusion, Mr. Atkinson's *clairvoyant* superintendence and control necessarily implies free will and conscience, and, consequently, the idea of rewards and punishments, and of a future life. Let Mr. Atkinson take his own premises, as implied in the above passage, and argue them on the model of Butler's *Analogy of Religion*, and he cannot

logically halt anywhere on the road, but must abandon materialism, necessity, and atheism.

We do not think it worth while to proceed further in this direction. Why should we, indeed, be called upon to go over this beaten ground of materialism and necessity, as if it had never been advanced, and never refuted? We do not find that Mr. Atkinson has discovered any new facts; but rather that he has put together, feebly and incoherently, what, in the hands of others, have been more cogent and forcible arguments.

We have chosen the above line of argument, first, because it deals most directly and completely with what is most dangerous in Mr. Atkinson's teaching; and, secondly, because it is the one Dr. Bushnan has followed. But it is a peculiarity in Mr. Atkinson's creed, that it can be refuted in various ways. We have adopted one way, but we might with equal ease have adopted another. We might have shewn, not the metaphysical absurdities of Mr. Atkinson's dogmas, but the utter want of harmony between them and truths for which we can advance evidence. We might insist on the phenomena of mind, and show how inconsistent these are with materialist doctrines. Or, from the recesses of our moral nature, we might have called forth facts, which cannot in any way be harmonized with non-volition and necessity. Or, passing externally, we might have arrayed against this materialist and atheist the truths clothed in the divine light of Revelation. In any case, Mr. Atkinson could have been as easily silenced as he has been by Dr. Bushnan, in the line of argument chosen by him. But it is unnecessary; nor should we have wasted even the space we have upon him, were it not that his book has been endorsed by one, whose name, unhappily, may prevent it from being utterly still-born.

We do not think it worth while to follow Mr. Atkinson into the mesmeric portion of his book; but we cannot resist giving the following excellent exposure, by Dr. Bushnan, of the inconceivable inconsistencies and absurdities which pervade this portion of it. Mr. Atkinson holds, as we need scarcely say, that there is no such thing as mind; that what we call mind, is a manifestation of the properties of matter. As we write these lines, we do so, according to Mr. Atkinson, because a certain chemical change in the brain gives us certain ideas, and a certain volition (if we can use the term) to express them; and this chemical change is produced inevitably and necessarily from the action of the laws of matter. But Mr. Atkinson believes that there are persons, in the mesmeric state or not, who can foretell future events. Therefore, as future events will be the results of certain future material changes, without which they could not occur; and as the act of thought in the brain of the person prophesying arises from *present* physical changes in his brain, if any one can foretell *future* events, it can only be by the same changes occurring in his brain which are hereafter to occur in the matter, by the changes of which are to be produced the results foretold. That is to say, A, foretelling an action of B's (which action is to be produced by a change in B's brain), must undergo at the time the same series of changes which B is to undergo at some future time, and these changes must occur in the same matter. But, as the matter producing the action of B, exists only in B, it is impossible that A, not being possessed of B's matter, can foresee the changes which are to occur in B, by the action of the matter proper to B. In other words, if A can foretell a future mental act of B, A must possess B's brain, and set it to work before it works for B himself. The whole thing is reduced to an absurdity; and nothing can more strikingly show Mr. Atkinson's deficiency of reasoning power, than the fact that he did not foresee the inevitable collision between his materialism and his mesmerism. But let us hear Dr. Bushnan on this point, for he exposes the nonsense of the thing most clearly.

"Mr. Atkinson says, that men can predict future events independently of mesmerism; that some men, in their ordinary state of life, can predict future events. What does this amount to? How does this admission accord with

his dogma that there is nothing in the universe, that there is nothing in the inorganic or organic world, but matter worked into its several forms, in accordance with the laws of physics and chemistry? According to his dogma, life is nothing but organism, and organism is nothing but the dust of the earth, which, under the operation of physical conditions—that is, under the operation of physical conditions of so rare concurrence, that in the present system of things, that concurrence seems to have taken place but once for each species of animals—has assorted itself in the nice proportions required for the peculiar structures of the existing animal kingdom. Mr. Atkinson does not perceive any difficulty in the supposition, that the thinking organism of man's brain should be produced by the mere affinities of the elementary substances which enter into its composition, and that the operation of external impressions made upon it, through the nerves, should determine it to various processes of thought, desire, emotion, and action on things without, through the muscular system. All these, according to him, are so many chemical changes, wrought on the elementary particles composing the brain by physical influences extending to it from without; and we so far agree with him, as to believe that a chemical change does occur in some part of the brain, as often as any such exertion of its function takes place. But when he says that the chemical change, which has just occurred in one man's brain, can be sympathised with in another man's brain, at a distance, even in an opposite quarter of the globe; or that such a chemical change in the brain of one individual, shall prefigure, in an intelligible form, the result of nice chemical changes which are to take place, during months or years, in the brains of thousands of individuals, bound neither to it nor to each other, by any tie acknowledged in the laws of chemistry; then we affirm that his conclusion holds nothing in common with his premises. Mr. Atkinson cites the fulfilment of various predictions, for the purpose of showing, according to our interpretation of his views, that the chemical action of the brain, in one individual, can intelligibly represent the results of the nicest and most complex kinds of chemical action in the brains of thousands of persons, during a succession of years. To prove that we are not trifling with the reader, we must be allowed to quote a passage, already cited: 'What are the instincts of animals, and the mind of man, but a result of chemical action or material process?' (p. 257.) But to return to the chemical process in one brain, which embodies intelligibly the sum of the like actions in thousands of brains, during a succession of years, Mr. Atkinson cites several predictions, afterwards accomplished, from the life of Joan of Arc: among others, the following. On the 1st of March, 1430, Joan made the following predictions: 'Before seven years are past, the English will abandon a larger prize than they have done before Orleans, and will lose everything in France. They will experience the severest loss they have ever felt in France; and this will be by a great victory, which God will bestow on the French.' Mr. Atkinson then enters into particulars, to show that this prediction was literally fulfilled; the great victory referred to being at the distance of twenty, if not of twenty-two years from the date of the prediction. Let the reader only cast one passing glance on the monstrous absurdity, which the author's mode of viewing this subject brings upon him—a few chemical changes in the brain of one individual representing, in an intelligible form, the results of thousands of forms of chemical changes thereafter to take place in the brains of millions of Frenchmen and Englishmen, during twenty years. Does Mr. Atkinson say what he refers to is simply a matter of fact? It is not our business at present to dispute his fact; we grant him the full benefit of it. But we are entitled to ask him to reconcile his so-called fact with the dogma as to the chemical character of mind, which runs through his book." (pp. 148-51.)

Dr. Bushnan then proceeds to show that, however he twist his argument,

Mr. Atkinson cannot avoid being impaled on one or other horn of a dilemma, and thus concludes:

"It is plainly altogether impossible to reconcile the idea of thought being the result of chemical action, with any kind of prediction, beyond what directly flows from a principle which includes the prediction. And this rule extends to all the forms of clairvoyance, or Mr. Atkinson must make his election, and either give up clairvoyance, or confess that there is something more in the operations of the human mind, than what is analogous to chemical or any other kind of material action." (p. 152.)

We shall not waste further space on Mr. Atkinson; and, in parting with him and his misguided associate, we shall only express the hope, that the universal condemnation and refutation their doctrines have received, may lead them to consider once more the momentous questions they have so rashly discussed. To say that their doctrines strike at the basis of all religion, is saying little; they strike away from under our feet all moral restraints, all reverence, all hope, all love; they would sap alike the virtue of individuals, and the integrity of states; and, if it were possible that they could ever be universally received, they would make this earth a very hell, seething in the impurities of a world, from which the divine traces of the Deity had been withdrawn.

Dr. Bushnan's analysis and refutation is a most well-timed one. It is excellently done, and will, we hope, prevent Mr. Atkinson from again parading his crude ideas on the public. Dr. Bushnan's style is easy, his facts logically arranged, and his conclusions inevitable. The only possible addition we could have wished, would have been a chapter devoted expressly to consider the obscurity of Mr. Atkinson's language, and his constant inconsistencies. As to the obscurity of language, it surpasses all credence; there are many sentences of which it is impossible to make sense; and how Miss Martineau, who has hitherto had the reputation of ability, could have accepted them, without asking what they meant, we cannot conceive. But perhaps Dr. Bushnan conceived, that Mr. Atkinson's vagueness and inaccuracy in the use of terms is sufficiently exhibited in the analysis of his opinions.

We do not wish to pay Dr. Gregory a compliment, when we say that we turn with pleasure from Mr. Atkinson to him. Completely as we differ from Dr. Gregory, to get back from Mr. Atkinson's speculations to simple mesmerism, seems by comparison returning into the region of common sense. Unfortunately, this is only by comparison; and, if Dr. Gregory's work is not so atrociously absurd as Mr. Atkinson's, this is owing merely to the infinitely narrower scope of the subjects treated of. Dr. Gregory's book is a large treatise on mesmerism, written with the fervour of a convert, and with the vigour of a man whose scientific reputation depends on the affirmation of his position. We have no intention of entering fully into it, for we have no wish to entangle ourselves at present in the thorny paths of mesmerism; but it is worth while to discover, if we can, how far Dr. Gregory's general arguments and method of regarding evidence tell in his favour.

The first letter is occupied with the consideration of what Dr. Gregory terms the "objections to animal magnetism". In few words, the gist of the chapter is, that we are not to reject "facts alleged on respectable testimony, because they appear absurd, incredible, or, in a vague sense, impossible"; and that "time will overcome the strongest prejudices", as has been seen in the establishment of the doctrines of the circulation of the blood, of vaccination, of the movements of the earth round the sun, etc. This is an argument which has been repeated over and over again by the advocates of mesmerism, as of almost every novelty; and Dr. Gregory, and others in the same position, are constantly pleased to assert that the "great truths" of mesmerism are now in the same position as were the "great truths" of astronomy, of geography, and of physiology, at the time of their first promulgation; and

that the parts of Galileo, Harvey, Jenner, and Columbus, are now enacted by the modest advocates of mesmerism, phrenology, and homœopathy. This line of argument has been so often made use of, that it is worth while to see exactly what it is worth.

When Dr. Gregory asserts that we are not to reject alleged facts (which are not clearly impossible), because they appear inconsistent with our previous experience, he is most perfectly in the right. But when any new fact is presented to the mind, the process appears to be this: The mind, seizing the new fact, compares it with other facts previously known, and, according to its greater or less knowledge of other facts, and its amount of logical power, determines the greater or less amount of probability of the alleged fact. Supposing that the evidence brought forth to support the facts is accordant with those previously known, or, not being accordant, is sufficient to counterbalance them, then the mind receives the new teaching without hesitation. All that the mind can do, or can be called upon to do, is to exercise its logical power fairly, in examining into the evidence for, and the position of, the facts. If a fact is presented, which may be in reality a great truth, yet is quite discordant with facts previously known, and the evidence of which is not such as to set aside these discordant facts, the mind logically can do nothing but refuse to admit the new truth. Thus, when Copernicus promulgated his hypothesis (for at the time it was no more) that the earth revolved round the sun, it seemed so inconsistent with what appeared to be facts, and was so little supported by arguments, especially by such arguments as could be apprehended by the generality of minds, that it was rejected by the whole world. And, logically, it was impossible that this should be otherwise; for, if this great truth had been at once welcomed by acclamation, it is evident that this could not have been the result of a proper action of mind, but would have been simply a belief without cause. Or, to take an example nearer home, English medical men have been much blamed for not immediately assenting to the doctrine of vaccination; but there is no doubt that the assent was given quite as soon as it logically ought to have been. In fact, when we look back with indignation on the men who opposed what were afterwards recognised as great truths, we do them injustice; they were often more reasonable than the advocates of the novel proposition.

When the alleged facts of clairvoyance are brought forward, would Dr. Gregory have us receive them at once? Would he not admit that the world must ponder them, must compare them with what it previously knew; must, in fact, judge them by the standard which each man possesses in his own knowledge and logical powers? Dr. Gregory will of course agree to this; but he will answer, that the facts in favour of clairvoyance, if known, are weighty enough to warrant its reception. Here we join issue, and do not hesitate to affirm that, when they are weighty enough, they will receive immediate assent. For we have no doubt that the verdict of the general body of thinkers is always given at the proper time, and that great truths never remain unacknowledged, when the evidence is logically sufficient.

We believe, then (Dr. Gregory may call this reasoning in a circle, but it is not), that the general incredulity of which he complains, proves, not that the alleged facts of clairvoyance are unknown, or foolishly rejected, but that, to the great body of thinkers of this country, they do not present themselves as truths. Dr. Gregory may say that this is no argument against their abstract truth, any more than the very reasonable incredulity of the time was an argument against vaccination. Indirectly, however, it is a very strong argument against clairvoyance; for, if the arguments for a truth are easily accessible to the multitude, there is no reason why they should not be at once received. The arguments for the Copernican theory were abstruse, and not easily appreciated, and the theory made slow progress; vaccination was supported by facts more easily ascertained, and its truth was early recognised; the effects of ether could be seen by every one, and ether and chloroform met

with immediate adoption. In a century after the death of Copernicus, all Europe believed that the earth moved and not the sun; before his death, Harvey was praised and honoured by the greatest medical corporate body in this country, the College of Physicians; in very few years, Jenner received a grant and public thanks from the House of Commons; in a few weeks, Simpson was hailed with the unanimous approbation of the profession, for the application of chloroform. If Dr. Gregory insists on instituting a parallel between these great truths and mesmerism, we cannot allow him to stop half way. He asserts that Copernicus was contemned; that Harvey was ridiculed; and that mesmerism in its turn is neglected for a time. But he should go on, and compare the length of time which the comparatively abstruse arguments for the Copernican theory and for the circulation of the blood took to establish themselves, with the length of time during which the easily apprehended so-called facts of clairvoyance have been unavailingly paraded before the world. It is now more than sixty years since Mesmer appeared before the French Academy, to prove the truth of that which even now has no firm footing among scientific men. Is it more difficult, then, to bring before us the facts of mesmerism, than the abstruse mathematical arguments of Copernicus, or the physiological ones of Harvey? On the contrary, there are abundance of mesmerisers, no lack of subjects, no difficulty in the perception of the phenomena; and yet, by the mesmerists' own shewing, they are, after sixty years, as neglected and unappreciated as were Copernicus, Galileo, and Harvey, at the first promulgation of their doctrines. We should advise Dr. Gregory to abandon his parallel, as, even taken in his own way, it tells more against than for him.

But we will turn the argument in another direction. When a novel doctrine is propounded, the proofs of which are so abstruse and peculiar, as to be unappreciable by the public generally (which is not the case with clairvoyance[1]), the uninitiated can only receive it on faith. Such faith can only be given, when it is felt that the character and logical powers of the professor of the new truth are such as to command our adhesion. Every one believes that the world goes round the sun, although not one person in ten thousand knows the demonstration of the fact. Supposing that from some cause we could not examine clairvoyance for ourselves, but had to depend on testimony; we should require, before believing the facts stated, to be satisfied that the mesmerist who had produced them was an honest man, and was also so logically constituted, as to warrant his having tested the facts in the way the public generally would test them, were they able to examine them for themselves. Thus Dr. Gregory has written a book, containing a certain number of facts about clairvoyance. These facts do not accord with our honest experience; we cannot logically receive them; but, supposing we had no experience on the subject, our next step would be, to endeavour to ascertain Dr. Gregory's logical capacity. To do this thoroughly, we should have to go systematically through his book; but, as our space does not permit this, we will take a single instance. At p. 243, we find the following statement:

"It has lately been stated by M. Allix, on the authority of M. Benoit in Paris, and of another discoverer (also I believe a Frenchman, who is now in America), both of whom, during the last ten years, have been employed in working out the discovery, which they had severally and independently made, although they are now associated to work it out, that this magnetic sympathy is remarkably developed in snails; that these animals, after having once been in communication or in contact, continue ever after to sympathise, no matter at what distance they may be. And it has been proposed to found

[1] We use the term clairvoyance in preference to mesmerism, because it implies a particular series of alleged phenomena, which we are certain have no existence; whereas some of what are absurdly called mesmeric phenomena are real.

on this fact a mode of communication between distant places. . . . . It would appear that every letter has a snail belonging to it in Paris; while in America each letter has also a snail, sympathetic with that of the same letter in Paris, the two snails of each letter having been at some period, and by some process, brought into full sympathy, and then separated and marked. When a word is to be spelled in Paris, the snail belonging to the first letter is brought by some galvanic apparatus into a state of disturbance, with which his fellow in America sympathises. But this requires to be ascertained, which is done by approaching in America, to all the snails successively, a testing apparatus, not described, which, however, includes a snail. On the approach of this, the snail whose fellow in Paris has been acted upon, exhibits some symptom which is not exhibited by any other, and the corresponding letter is noted down."

Dr. Gregory states that this at first appeared very ridiculous, but that when he recollected all "that he had seen of sympathy in men, all that was known about sympathy in the lower animals, . . . he perceived that the only difficulty lay in admitting the fact of the extraordinary sympathy between snails. Now I know nothing," continues Dr. Gregory, "about the habits of snails; and surely I am not entitled to reject facts thus attested, without some investigation into them. I cannot say that the alleged sympathy is impossible." (p. 245.)

We venture to assert, that there is not one of our readers, who will not consider that the utter want of parallel facts to this one (that is to say, its unusual nature), the opposing facts which immediately rise up in opposition to it, the deficiency of evidence which is brought forward to support it, render it impossible that any sound-judging person should place this alleged fact anywhere but on the very borders of incredibility, in the region of the highest improbability. It is clearly not impossible, but neither are hundreds of assertions which we hear daily, and which yet we feel that we may without hesitation consider as infinitely improbable. What, then, can we think of the judgment and logical powers of the man, who can allude to this improbable assertion in the following terms:

"It will certainly be very remarkable, if a snail telegraph should come into action, which, in spite of the proverbial slowness of the animal concerned, should rival in rapidity the electric telegraph, and surpass it in security; inasmuch as there are no wires to be cut by an enemy, besides being infinitely less costly, since no solid tangible means of communication are required, and all that is needed is the apparatus at either end of the line, and the properly prepared snails." (p. 246.)

We have selected this instance of facile and illogical belief, because it is the most striking we can find in the book; but the same want of judgment and discrimination pervades every page, and warrants us in asserting, that even were we at all doubtful of the error of Dr. Gregory's facts, his manner of testifying to them is so unfortunate, as to deprive us of the power of being duly impressed by them.

We need not trouble ourselves to go further into an analysis of Dr. Gregory's mental peculiarities; one specimen will suffice for all. We shall only say that Dr. Gregory must pardon us, if, admitting as we do most fully his sincerity, we must entertain the strongest doubts of his power of determining the different degrees of probability, or, in other words, of distinguishing truth from error.

The pamphlets of Drs. Hughes Bennett and Wood relate to the same subject, viz. the curious experiments which have been lately exhibited, under the absurd name of electro-biology. We believe these experiments will be of great use in opening the eyes of the public to the real source of what is true, in the phenomena which the mesmerists have so erroneously attempted to bind up into a system, and to explain by a crazy hypothesis. This curious subjugation of one mind by another, and the power of direction which the stronger mind can by suggestion give to the weaker, has been long known to medical men.

The experiments of Dr. Darling and Mr. Lewis have proved that the facility of impression, which we had thought had been the characteristic of the mind of the middle ages rather than our own, still exists among us to a great extent. Drs. Bennett and Wood's papers are very interesting; and, with Mr. Braid's papers and works, are well worthy the study of those who are interested in the remarkable mental phenomena, which the older physicians classified under the term "ecstacy".

Digitaline. Rapports de MM. Rayer, Soubeiran et Bouillaud. pp. 55. Paris, Martinet: 1851.

The first of these Reports to the Académie Nationale de Médecine, relates to the chemical and pharmaceutical properties of digitaline; the second to its physiological and therapeutical action. The works on which these Reports are founded are upon digitalis, and are written by MM. Quevenne and Homolle, who, in the preamble of the memoir which forms the subject of the first Report, use the following language: "The capital point in the chemical and therapeutical history of digitalis, the extraction of the active principle of this plant, having been attained by us, we should have confined our researches to obtaining this result, and should have been satisfied with the sanction which the Society of Pharmacy had given to this first effort, by decreeing to the memoir presented by one of us the prize proposed for the extraction of digitaline. But a great number of persons, although admitting the importance of the discovery of this principle, presented to our notice some objections, which were more or less serious. Thus, for example, what were the other bodies which accompanied the digitaline in the plant? Are there not some among them which contribute to the reputed sedative or diuretic actions of digitalis? Or rather, does digitaline by itself represent these two properties? Others inquired whether this principle always offered the desired degree of identity, and if the physician could always rely in his practice upon a sufficient degree of fixity of constitution? Some even went so far as to say that, while acknowledging that digitaline exhibited indeed the properties of the plant, they would not dare to run the risk of employing a substance of such powerful properties, in the fear of its eventual inexact administration. On the other hand, every one asked himself whether digitaline, a principle which is amorphous, or of a doubtful crystallisation, was really a pure product, or if it were not possible to disengage it from some body retained in combination, and to obtain it afterwards with new and better defined properties? Familiarised more than others with the question, we were the first to feel the value of several of these objections; to ask ourselves, for example, if there were not some of the other principles of the plant, which, alone or by themselves, might possess an action worthy of interest on the animal economy. We therefore resumed our work, stimulated by our first success, led almost irresistibly by the desire of completing our first discovery, and governed by the wish of not introducing any other than a well-studied medicine into therapeutics." The reporters then proceed to state that the first memoir is divided into two parts, one relating only to digitaline, and the other devoted to all the other principles found in digitalis. The first of these is stated by the authors as being alone of practical interest; and they add that it is to it only that they desire to draw the attention of the Academy. The reporters, however, enumerate in a foot-note the other principles besides digitaline which are found in digitalis. These are: 1. *Digitalose;* 2. *Digitalin;* 3. *Digitalide;* 4. *Digitalic acid;* 5. *Antirrhinic acid;* 6. *Digitaleic acid;* 7. *Tannic acid;* 8. *Starch;* 9. *Sugar;* 10. *Pectine;* 11. *An azotised albuminoid matter;* 12 *An orange-red crystallisable colouring matter;* 13. *Chlorophyll;* 14. *A volatile oil.*

MM. Homolle and Quevenne examine, in as many separate paragraphs,

I. *The Purification of Digitaline, and its Chemical Properties.* II. *The Test of Digitaline.* III. *The best form of administering Digitaline in Medicine.*

To purify crude digitaline, authors have treated it with ether slightly alcoholised, which takes up digitaline. But this liquor dissolves also the *digitalose*, and leaves the *digitaline*. To separate the former from the digitaline, the solution is submitted to evaporation, and the residue is treated with alcohol at 60°, which dissolves the digitaline and eliminates the digitalose. Evaporated at a gentle heat, this solution by weak alcohol gives finally *pure* digitaline, or at least retaining very little of the two bodies just indicated, which cannot be completely isolated from it; so great, according to the authors, is the obstinacy with which digitaline retains the last traces of these substances. These able experimenters vainly made numerous attempts to crystallise the digitaline so obtained, and to procure it in a purer state than the specimen formerly described by one of them. When this purification is accomplished, the digitaline presents itself under the form of scaly striæ, or of masses of a straw-yellow colour, of a resinoid aspect, more or less transparent, easily crushed, and then forming a yellowish pale powder. When once isolated, the digitaline is unalterable in the air; it possesses a slight aromatic odour of a peculiar nature, and a very marked bitterness.

Digitaline is soluble in small quantity in the serum of the blood, without producing in it any apparent change. The proportion dissolved appears to be the same as in water. It is dissolved also in filtered gastric juice. Digitaline exerts no action upon litmus. It is dissolved also in small quantity in water; and in all proportions in weak or concentrated alcohol. *The characteristic and distinctive property of digitaline is, to be coloured of an emerald green by concentrated hydrochloric acid, forming a turbid solution.* Digitaline belongs to the class of immediate neutral principles; it combines neither with acids (the tannic excepted) nor with alkalis.

To be assured of the *identity* or of the *quality* of digitaline, an important and capital point in a therapeutical view, MM. Homolle and Quevenne have paid attention to the different degrees of bitterness of this substance; for they state that its degree of bitterness is incontestably a measure of its degree of energy. To succeed in this test, the following plan is to be adopted: "One centigramme of digitaline is dissolved in two grammes of alcohol, and the mixture is progressively diluted with water, until the complete disappearance of the bitter taste. If the digitaline is good, this quantity will require the employment of two *litres* of water." This method of appreciating the intensity of the taste of bodies, employed already by other observers, to judge of the richness of certain medicinal preparations, has been considered by MM. Homolle and Quevenne as proper for enabling them to obtain digitaline always identical with itself. This test is the more indispensable, because, in conforming rigorously to the mode of preparation just described, no one can be certain of having always the same product. Digitaline, except in its action on the animal economy, does not possess, unfortunately, any essential property by which we can positively recognise its purity. It does not crystallise, and does not form any crystallisable combinations; we can therefore never affirm that it has been obtained sufficiently pure, or that it has not been mixed. Let the person who prepares digitaline, therefore, be well acquainted with the fact, that this product does not offer any suitable proofs of its purity, except inasmuch as, subject to the experiment of dilution, it gives the same result as a *type* of acknowledged purity. Let the physician be also warned that digitaline does not constitute a medicine of such a certain identity that he should neglect a great degree of prudence in its use; a prudence which, besides, is demanded by the extreme activity of this new therapeutic agent.

MM. Homolle and Quevenne having thus succeeded in obtaining digitaline in the state which they call *identical*, it remained for them to determine what was the pharmaceutic form for giving it, under the quadruple relation of

safety, *convenience*, *good preservation*, and *easy administration*. The solution of this problem was the more important, because the product under consideration possesses a very great degree of activity, so that it ought to be administered only in milligrammes, or, in fact, in an *infinitesimal* dose. Among the different pharmaceutical forms considered by MM. Homolle and Quevenne, the pilular form is that to which they have given the preference. "The variety," say these authors, "which appears to us the best, is that of little sugar-plums, in which the active matter is enveloped in a layer of sugar, so that the patient, by reason of their very small size, can swallow them easily, without mastication, and therefore without any other perception than that of the sugar which covers them." These sugar-plums are called granules by the authors, and each contains a milligramme of digitaline; and it appears that this mode of administration preserves the powers of the drug to a period of which MM. Homolle and Quevenne have not yet ascertained the limit.

In concluding the analysis of the first memoir of MM. Homolle and Quevenne, the reporters think themselves justified in declaring that the researches of those authors deserve to be placed among the discoveries of medical science, and, as a testimony of the approbation of the Académie, they recommend the memoir for publication.

II. The Second Report is upon the Physiological and Therapeutical action of Digitaline, and is founded upon a second paper communicated by MM. Homolle and Quevenne upon that subject. These gentlemen propose to establish, "that digitaline is the only active principle of digitalis; that it presents all its physiological and therapeutical properties, and that the constancy of its effects, as well as its unchangeableness, give it an incontestable advantage over the pharmaceutical preparations of digitalis." In order to give to the Académie a just account of the labours of MM. Homolle and Quevenne, the reporters divide their analysis into three parts. The first is devoted to a rapid sketch of the opinions expressed upon the properties of digitalis: the second relates to the examination of the researches made by the authors of the memoir on the properties of digitaline: and the third contains the account of the experiments instituted by the commission.

1. This part of the report does not require a detailed examination, as it presents no novelty, except, perhaps, the analogy drawn by the reporter between the effects of digitalis and those of *retained bile*, as observed in jaundice. The reporter states, that he has observed for eighteen years the effects of this *animal digitalis*, as he somewhat fancifully terms it, and that it invariably retards the pulse, except in those cases where jaundice is accompanied by inflammation and fever.

2. This part contains an account of a series of physiological and pathological experiments on the properties of digitaline, compared with those of the other preparations of digitalis. One of the authors made a series of experiments on himself, and his exemplary exactness in recording the results is warmly eulogised by the reporters. From the analysis of the first six trials, undertaken in the course of the years 1842, 1843, 1847, 1848, 1850, it results that the *medium* of the diminution in number of the pulsations of the heart and arteries has been about four pulsations *during*, and four *after*, the administration of the medicine. Experiments made on two dogs proved that, in one, the pulse was lowered from 59 to 51, and in the other, from 87 to 69, by the administration of minute doses of digitaline. As to the comparative efficacy of the preparations of digitalis hitherto employed, and of digitaline, MM. Homolle and Quevenne leave this point to be finally determined by clinical experience; but they think that their own observations, and the works published up to the present time, lead to the belief that the question will be resolved in favour of digitaline; and they quote the authority of MM. Hervieux, Strohl, and Sandras, who have all employed the digitaline in their practice with the

most happy results. M. Hervieux states, that one of the circumstances which plead most in favour of digitaline, is the facility of apportioning the dose ; for, while this can be done in the case of the preparations of digitalis only by a very rough approximation, it can be accomplished in the case of digitaline with a mathematical rigour. M. Sandras declares, that he has never met with the inconveniences attributed to digitalis, while he has employed digitaline ; the latter has appeared to him to be easy to take, and easy for the patient to bear ; its effect has been perfectly fixed and regular, according to the doses in which he prescribed it. Some clinical observations made by MM. Homolle and Quevenne are then related, but we cannot say either that the cases seem to be well chosen, or the results accurately noted ; and the indiscriminate manner in which the digitaline was prescribed, is not to be commended. In the first case, for instance, there was a "puerperal affection", but we are not told what was its nature ; in the second, there was an "affection of the heart", and a "profound disturbance of the circulation"; in the third case, there was hypertrophy of the heart, with "lesion of the orifices"; in the fourth case, there was "profound perturbation of the cardiac circulation"; all these terms are far too vague for the present advanced state of science. Again, the digitaline was given in the seventh case for cyanosis, from persistence of the foramen ovale ; and in the sixth, it was given in large doses for anasarca with albuminous urine. In our humble opinion, neither of these diseases would justify the use of digitalis in any form.

The following statement by the authors is of extreme importance, and completely accounts for the frequent uncertainty which attends the employment of digitalis in medical practice. "We have been able", say MM. Homolle and Quevenne, "to ascertain, when we have procured our specimens of digitalis, that, in the quantity which existed in 1847 on the Place de Paris, there was about a fourth part well dried, a fourth of middling quality, and half which was badly dried and manifestly bad. It is evident that this last and considerable fraction was not thrown away ; and, as digitalis has only a medical use, we are obliged to admit that it has been consumed by the sick."

3. In this portion, one of the reporters (we believe M. Bouillaud) records his own clinical experience of the effects of digitaline, which he has given to 150 or 200 patients, of different age and sex. The cases in which it was administered were simple nervous diseases of the heart, but principally chronic organic affections of this organ; and a few were well-ascertained cases of intermittent fever. In all these, with the exception of three, there was a more or less considerable retardation of the pulsations of the heart and arteries ; and in the three exceptions, the frequency of the pulse was maintained by a febrile phlegmasia. In several cases, also, where the acceleration of the pulsations of the heart was accompanied by irregularities and intermissions, with disorder and disturbance of its natural rhythm, digitaline not only calmed the palpitations, but it also regulated the disordered action of the organ. In intermittent fever also, the reporter has found digitaline of equal importance with digitalis, which latter he has been in the habit of prescribing with advantage in this disease, although he does not by any means assert that it is superior, or even equal, to quina as an antiperiodic and febrifuge. The commission does not decide in the present communication upon the question of the superiority of digitaline over the other preparations of digitalis, but leaves it for future investigation : and they conclude their very excellent report by a well-deserved tribute of praise to MM. Homolle and Quevenne, for their investigations on the preparation and properties of digitaline.

Hand-Book of Natural Philosophy and Astronomy. By Dionysius Lardner, D.C.L., formerly Professor of Natural Philosophy and Astronomy in University College, London. *First Course:* Mechanics—Hydrostatics—Hydraulics—Pneumatics—Sound—Optics. pp. 819. London, 1851.

This is one of the best elementary treatises on Natural Philosophy which we have ever read; and to those who wish to obtain a knowledge of this important branch of science without wading through a multitude of huge volumes, we cordially recommend its perusal. The author is favourably known to the public by his numerous contributions to physical science, and the present work is well calculated to sustain his high reputation. While advocating the necessity of at least some knowledge of natural philosophy for all the educated classes of society, we would especially recommend that it should not be neglected by the members of our own profession; and although we admit that the student's time is pretty well occupied by sciences immediately connected with his future pursuits, yet there are periods of his pupilage, and leisure hours in practice, when works like the present may be read with pleasure and advantage. To the physiological student, an acquaintance with natural philosophy is indispensable; for although we do not agree with some learned authorities that the principle of life is a galvanic battery, or with others that the pulsations of the heart are produced by a series of chemical combinations and decompositions, yet we cannot but see that many of the functions of the human body are performed by means of laws exactly similar to those which act upon inanimate matter. Thus, whatever may be the origin of nervous influence or of muscular power, there can be no doubt that the limbs with their muscles form nothing more nor less than a series of levers—that the circulation of the blood is regulated by the laws of hydraulics—that the faculties of hearing and speaking, with all their attendant enjoyments, are closely connected with the principles of acoustics—that the beautiful mechanism of the eye is merely a series of membranes and humours for the reflection, refraction, transmission and absorption of the luminous rays—and that its defects may be remedied by the use of instruments constructed upon optical principles. We are happy to observe, that Dr. Lardner omits no opportunity of directing attention to the relation of physics to the mechanism of the human body; and, although his acquaintance with anatomy and physiology is not conspicuous, yet his occasional references to those subjects are particularly welcome to the medical reader, and exhibit the versatile and varied talents of the author.

Histoire de la Vaccination en Turquie, en Grèce, et aux Indes Orientales. Par Jean de Carro, Docteur en Médecine. pp. 116. Vienne: 1804.

German Translation of the above work, with Additions and Annotations. By Friedrich Gotthilf Friese, M.D. pp. 175. Breslau: 1804.

This is a highly interesting account of the introduction of Vaccination into the east of Europe, and Asia, for which the inhabitants of those countries are indebted to the philanthropic and persevering zeal of Dr. de Carro. It will be remembered, that we published, in our account of the proceedings of the Jenner Monument Committee, at p. 682 of our number for July, a letter from Dr. de Carro, to which was appended a brief statement of the services which he had rendered in the dissemination of vaccination in foreign countries. The interest attached to the subject will, we trust, form a sufficient apology—if any be needed—for our thus noticing a work published nearly half a century ago.

The introduction of vaccination into Turkey appears to have arisen from a conversation between Dr. de Carro and the father and mother of Lady Elgin, wife of the British Ambassador at Constantinople. In December 1800,

Lord Elgin communicated to Dr. de Carro the news of the first successful attempt at vaccination in Turkey, on the person of his infant son; and from the matter taken from the child, several other persons were vaccinated. Under the encouragement and direction of Lord Elgin, Dr. W. Scott, Dr. Hesse, etc., vaccination made progress; although it was retarded in a measure by the prejudices of the inhabitants, and other causes, so that the matter often became exhausted, and fresh supplies had to be obtained from Dr. de Carro in Austria, and from England.

In March 1802, Lord and Lady Elgin, with Dr. Scott, visited Greece and the Archipelago; and on the 7th November in that year, Dr. Scott wrote to Dr. de Carro, that vaccination had been commenced in Athens, and that upwards of eighty persons of all ages had been submitted to the operation in that city. The British consul at Salonica was supplied with vaccine matter for the use of M. La Font, a French physician practising in that place. This matter, supplied by Lord Elgin, at first failed: but, on a supply being received by M. La Font from Dr. de Carro, the success was most encouraging. "All the inhabitants of that town adopted vaccination with a zeal worthy of the most enlightened people: Turks, Armenians, Greeks, and Franks, all had recourse to this preservative. In a word, on March 3, 1803, six months after commencing the practice, M. La Font had vaccinated above 600 persons; and the number had risen to 1132 on June 3, in the same year. The inhabitants of neighbouring towns are also desirous of enjoying the benefit; he has received a pressing invitation from the inhabitants of Larissa in Thessaly; but, as his occupations do not permit him to leave Salonica, he has deputed pupils to vaccinate in any place in which the inhabitants may desire it." (pp. 14, 15.) Under the care of Dr. Moreschi, and other physicians, vaccination became general in Greece.

In the mean time, great sensation had been produced in Asia by the news of the introduction of vaccination into Constantinople: and Lord Elgin thus wrote to Sir A. Paget, ambassador extraordinary at Vienna, in January 1802: "They write to me so often from Bassora, the East Indies, and Ceylon, for vaccine matter, that I beg you will immediately engage Dr. de Carro to send me some by all the couriers, until I desire him to desist. That which I have sent has produced no effect." A supply was sent to Bassora and Bagdad; and thence vaccination rapidly extended over Asia. The accounts furnished from time to time to Dr. de Carro, by the British consuls and residents in Bagdad and other Eastern cities, must have been most encouraging to his energetic zeal; but we regret that we cannot reproduce them at greater length.

Interspersed in the work are various pathological observations on the relation of cow-pox to the grease in horses, on its efficacy as a preventative of the plague, on the mode of preservation of vaccine matter, etc. There is also a copy of a *procès-verbal*, signed by Dr. A. B. Auban of Constantinople, and some of his colleagues, attesting the presence of cow-pox in certain small villages near Constantinople, in which the inhabitants, after becoming infected by it, remained free from the small-pox and from plague.

Since the time when this work was written, vaccination has become an everyday occurrence throughout the civilised world; and, though it may not have met with all the success which some of its more sanguine promoters perhaps anticipated, the amount of benefit conferred by the discovery of Jenner is too great to be particularised. The committee now engaged in promoting the erection of a monument to Jenner are engaged in a worthy task—that of enabling the whole civilised world to display a tangible memorial of their gratitude to the memory of one of their greatest benefactors. We heartily wish them success in their endeavours.

As to the venerable author of the work before us, we can imagine with what satisfaction he must regard the success which has attended his endea-

vours, commenced upwards of half a century ago, to disseminate the blessings of vaccination. Titles and honourable marks of distinction have been, even up to his old age, conferred on him ; yet we doubt not that he values before all these the appellation of "*the friend and first apostle of Jenner*". Of himself, as the introducer of vaccination into the continent of Europe, he may say—

"Exegi monumentum ære perennius."

In concluding, let us express the sincere hope, that Dr. de Carro may long live in health and vigour; and that he may speedily see the completion of the London monument to Edward Jenner.

On Diseases of the Mucous Membrane of the Throat, and their Treatment by Topical Medication. By William R. Wagstaff, M.A., M.D., etc. pp. 183. London: 1851.

In this treatise, attention is drawn in a special manner to the effects of morbid action in the muciparous glands, and to those conditions of the mucous membrane which impair its organic function. A classification of these diseases is adopted, which has direct reference to the tissue supposed to be primarily affected by the morbific influences. As there is nothing, either in the pathology or the symptoms described, which need detain us, we shall address ourselves at once to those parts of Dr. Wagstaff's treatise in which he proposes "topical medication" as a substitute for "those general remedies, which are so carefully dwelt on by most writers". "Unless some manifest disease", observes Dr. Wagstaff, "appears to have affected all parts of the system, as is often the case in influenza, no general remedial measures of any moment will be required ; the disease, being a local one, will need little beside local treatment for its removal". (p. 41.)

We would perfectly agree with Dr. Wagstaff that, provided a disease be indeed a local one, it will require little more than a local remedy. But the whole progress of modern science seems to point out, that we can no more study with advantage the diseases of separate parts, unconnected with the general system, than our forefathers could learn their anatomy correctly with the nerves and arteries spread out before them upon a board. All the blood in the body is continually passing through the lungs, and may communicate to them conditions, the result of influences which it has received in any part of the body; and how often these may give rise to symptoms similar to those of "acute catarrh", derived only from strictly local causes, we have yet to learn. The remedial measure upon which Dr. Wagstaff relies with the greatest confidence, "is the application of a powerful astringent directly to the affected portion of the mucous membrane, or as near to the diseased part as our present knowledge and mechanical appliances will enable us to make it". (p. 43.)

The first case related by Dr. Wagstaff of the efficacy of this treatment is quoted from Sir C. Bell, and is not calculated to confirm our notions of the local origin of the diseases of these parts. It is the case of a young woman, who had extensive ulceration of the glottis, which was followed by long-continued inflammation of the throat, and accompanied by a harsh, sawing sound, and with much difficulty in breathing. On attempting to swallow a little broth, much of it went into the wind-pipe, and she had a great struggle in recovering. (p. 45.) In this case, Sir C. Bell found that the irritation was much relieved by the application of the nitrate of silver; and we do not doubt the propriety of this mode of treatment, but we believe that there are few well-informed physicians, or surgeons, in the present day, who would not have directed their principal attention to the previous history of the case, and endeavoured to ascertain what vice of constitution, or taint in the system, had been the original cause of the ulceration, and have treated the patient accordingly.

The instrument employed by Dr. Wagstaff for the topical medication is "a whalebone probang, to the end of which a small rounded piece of fine sponge is attached. The method of employing this is, to convey the end of a spatula to the lingual base of the epiglottis, then, by pressing the tongue firmly down and drawing it forward, the laryngeal surface of the epiglottis may be exposed; when this organ is brought fairly in view, the great difficulty of the operation is overcome; for it only remains to direct the patient to inspire gently, and to pass the sponge of the probang to the posterior surface of the epiglottis, and, by a rapid motion, to press it *downward* and *forward* in order to introduce it into the larynx." (p. 52,)

The substances employed are the perchlor. hydrarg., the bicyanid. hydrarg., the nitras hydrarg., the nitras potass., the sulphas cupri, and the nitras argent. Of all these, that to which Dr. Wagstaff gives the decided preference is the nitrate of silver, on account of "its rapid action, its efficacy, and its harmlessness". A solution of twenty grains of the salt to an ounce of distilled water, is recommended in the milder cases; and this may be increased, according to circumstances, to sixty or even to eighty grains.

The efficacy of nitrate of silver has lately been extolled for many different affections, and its use has been particularly recommended for diseases of internal cavities. We cannot help thinking, that much of its mysterious virtue would disappear, if its effects were accurately and honestly observed on the surface of the body. When there is difficulty in applying it, and where its results are not readily observed, the curative virtues attributed to it are rather startling. The diseases of the ears, eyes, and nose, of the urethra and uterus, all in turn yield a willing obedience to its magic influence.

In making these observations, we by no means wish to disparage the use of nitrate of silver as a valuable adjunct in the treatment of diseases of these parts; but we would caution our readers against adopting favorite opinions of its "specific" virtues, which in practice would not be realised.

The First Step in Chemistry. By Robert Galloway, F.C.S., Lecturer on Chemistry in Putney College. pp. 91. London: 1851.

This is a very well-written little volume, and will be of use in introducing the study of chemistry into schools, as a part of the education of youth. It is divided into ten chapters, which comprise many of the fundamental laws of the science, and it contains numerous exercises, dispersed among the chapters, to be performed by the student, and calculated to fix in his mind the principles of the foregoing explanations. It has often been to us a matter of surprise, that the subject of chemistry has not yet been adopted at boys' schools; one reason for this may be, that the books written on this science are too difficult for beginners. The work now before us is calculated to supply this defect; and deeply impressed as we are with the importance of teaching chemistry to the youth of this country, in which the science has already made, and is still making, such brilliant progress, we heartily commend this unpretending and useful work to the heads of scholastic establishments, and to others who are anxious to initiate their pupils into the principles of a most fascinating and most useful branch of human knowledge.

On Gout; its History, its Causes, and its Cure. By Wm. Gairdner, M.D. *Second Edition.* pp. 300. London: 1851.

Dr. Gairdner has availed himself of the demand for a second edition, to improve and amplify his excellent treatise.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

ANATOMY AND PHYSIOLOGY.

PROFESSOR SIMPSON ON VITAL CONTRACTIONS IN THE UMBILICAL ARTERIES AND VEINS.

Up to a late period, some physiologists doubted entirely whether the larger arteries of the human body could be made to contract at individual points by stimulants applied to those points. Few or no satisfactory experiments have yet been published, shewing that the veins possess the property of contracting locally under local stimuli. But, in the umbilical cord, the medical practitioner may have daily an opportunity of repeating experiments, which prove both of these important physiological facts: viz. the contraction both of the tubes of arteries, and of the tubes of veins, under local stimuli applied to them.

For some time past, Dr. Simpson has pointed out to his pupils the following facts, regarding the contractility of the umbilical veins and arteries.

1. After the child is born, the cord (whether tied or not) is generally seen to become contracted at different points, in consequence of the local contraction at those points of the vessels included within it. In fact, its vessels are thrown, by the irritation of the external atmosphere, and in consequence of their partially empty condition, into tubes consisting of a series of dilatations and contractions, like the peristaltic contractions of the intestine; but with this difference, that the contractions of the vessels are permanent.

2. By pinching a portion of the cord, immediately after the birth of the child, between the nails of the thumb and finger, contractions of the vessels of the cord will be seen to occur at the point irritated. And if this mechanical irritation is confined to individual vessels, as to one of the arteries, or to the vein, the effect is equally marked.

3. If the sheath of the cord be slit up by a pair of scissors or a knife, with any of its vessels or arteries exposed, the same experiment may be repeated upon the exposed individual vessels with similar effect: viz., that the mechanical pinching of them will be followed, in the course of a short time, by a gradual but very marked contraction in the irritated part.

4. Similar local contractions of these vessels occur, under the local application to them of irritating chemical substances, or of electricity.

5. These contractions do not instantly follow the application of the stimulant, but a short time intervenes before the effect is seen, and the contraction is permanent.

6. When the experiment is made upon the human umbilical cord, or upon that of the lower animals, when the circulation is still going on in the vessels of the cord, the irritated vessel will sometimes almost entirely close its tube under such local irritation.

7. These simple experiments, illustrative of the contractility and irritability of the coats of the veins and arteries, are the more remarkable as seen in the umbilical veins and arteries, in consequence of anatomists not being able to detect any nerves in the umbilical cord; although probably elementary nervous tissue may exist in some form in it. For if it did not exist, then we would have irritability in these vessels existing without nervous influence. Dr. Simpson proposed the investigation of the existence of nerve in any form in the umbilical cord and its vessels, as an interesting microscopical study, in reference to the physiological question of the dependence or independence of the contractility of vessels on the presence of nerves. [*Monthly Journal of Medical Science*, May 1851.]

PRACTICE OF MEDICINE AND PATHOLOGY.

PROFESSOR CHRISTISON ON THE TREATMENT OF ASCITES AND OTHER FORMS OF DROPSY BY DIURETICS EXTERNALLY APPLIED.

In the *Edinburgh Monthly Journal* for October 1850, Dr. CHRISTISON makes the following remarks:

"Some years ago, a short paper appeared in a French periodical, on the treatment of ascites by means of digitalis and squill applied outwardly in the form of liniment; and three cases were given, illustrating the diuretic and curative effects of this treatment, after failure by means of diuretics administered in the usual way, as well as by powerful purgatives. At the time, I had under my charge a boy, ten years of age, who had laboured under simple ascites—that is, without any œdema, even in the limbs—for a period of five or six months, during which the effusion had slowly and steadily increased, notwithstanding the employment of brisk purgatives, various powerful diuretics, and mercurial action. There was great difficulty in referring this affection to any particular organic disease; but, on the whole, a previous chronic peritonitis was suspected to be the cause. When he came under my care, purgatives and diuretics internally were again tried, and especially digitalis and squill, but with no better success than before. On the contrary, the enlargement and tension of the belly became gradually very great, so that the boy was confined in a great measure to bed. The French suggestion came therefore most opportunely. A mixture of equal parts of tincture of digitalis, tincture of squill, and tincture of soap, was rubbed freely and diligently into the skin of the belly morning and evening. At an early period,—so early, if I do not mistake, as the beginning of the third day,—the urine began for the first time to increase; by and by a copious flow was established; the ascites quickly subsided, and in about fourteen days entirely disappeared; the boy at the same time gained flesh and strength under the use of simple bitters and chalybeates, and, ere long, his health was completely restored. When I last heard of him, four or five years afterwards, he continued well and strong.

"The same treatment was tried afterwards in several cases more or less similar to this, but for a time with invariable disappointment. In all, however, the more ordinary measures had previously been exhausted to no purpose; and, in most of them, decided organic disease of some abdominal organ was ascertained to be the cause of the effusion. At length the following remarkable case revived the hopes excited by the first experiment. A boy, about nine years of age, had been affected with enlargement of the liver and ascites for nearly a twelvemonth. Dr. James Duncan, his medical attendant, had employed all the most serviceable remedies, but to very little purpose. Mercury, iodine, purgatives, diuretics, both vegetable and mineral, had been faithfully given, occasionally with partial effect, but not with any satisfactory amendment. At length the ascitical distension became enormous, the integuments acquired a glistening translucent appearance, the respiration was impeded, and the tightness of the skin prevented the nature and extent of the disease of the liver from being ascertained. But there was no œdema, even in the limbs. In this state I saw him for the first time. Before resorting to the temporary expedient of tapping, it was proposed to make trial of the diuretic liniment; but the integuments were so irritable, that the method by friction could not be persevered with. Dr. Duncan, however, proposed to substitute a strong infusion of digitalis, four times the pharmaceutic strength, and to apply it continuously by linen cloths covered with oil-silk to impede evaporation. In a few days, diuresis set in; and a profuse flow of urine quickly removed the whole dropsical effusion. The liver was soon felt to be greatly enlarged, lobulated, and rugose; which dis-

ease, it need scarcely be added, proved fatal a few months afterwards. But it is remarkable that the ascites never returned.

"I have often used the same method since, both in simple ascites, and likewise where that affection formed a prominent part of a more general dropsy. The issue has of course been variable, and more frequently unfavourable than successful. But, on the whole, the results of my own observation, and the experience of others in Edinburgh, who have also tried the practice, lead to the conclusion, that digitalis not unfrequently succeeds in this way, when not only it, but likewise all other diuretics taken internally, as well as the purgative method of cure, prove of no avail. It has likewise been tried with success in a few cases of obstinate excessive œdema of the limbs, in connexion with general anarsaca and Bright's disease of the kidneys, after diaphoretics, purgatives, and diuretics internally, had failed to give relief. The late invention of the texture called 'Spongio-piline' has facilitated the application of the treatment. A large sheet of spongio-piline, soaked moderately with a strong infusion of digitalis, made with one ounce of powdered leaves to twenty-four ounces of boiling water, may be applied to the whole abdomen, or to each limb, and worn constantly, without any material inconvenience to the patient."

NARCISSUS PSEUDO-NARCISSUS IN EPILEPSY.

None of the plants of the narcissus tribe are, in this country, employed in medicine; but in France, the leaves and flowers of the N. pseudo-narcissus have a considerable reputation, especially in hooping-cough and other spasmodic affections.

In the *Journal de Médecine et de Chirurgie* for May 1851, it is stated that Dr. Pichot has recently celebrated the virtues of this plant in epilepsy. He gave it to a man of twenty-three, who had been subject to epileptic attacks for four months. Each fit lasted for from one to four hours; and terminated by general convulsions and cries. He was bled from the arm; and afterwards, sulphate of quinine, with extract of valerian, were administered without result. On the 22nd of September, the first dose of the N. pseudo-narcissus was administered; and from that time, for fifteen days, three decigrammes were given twice a day. After this time, he discontinued the medicine for a week, when the dose was increased; and, towards the end of the month, he was taking four daily doses of three decigrammes. Up to the 2nd November he had had no more fits; he only experienced some transient sensations of giddiness; but on this account it was thought right to advise the continuance of a remedy, to which, there seemed no reason to doubt, his amelioration ought to be ascribed.

TETANUS TREATED BY FRICTIONS WITH CHLOROFORM AND WITH ETHER.

Dr. Morisseau relates the following case in the *Union Médicale* for June 21, 1851.

About eighteen months ago, he had as a patient in hospital a man, aged above forty, who was suffering from traumatic tetanus. When seen by Dr. Morisseau, the patient had permanent contraction of the muscles of the jaw, chest, abdomen, and back, with convulsive movements every hour. Four grammes of chloroform were ordered to be rubbed immediately on the surface of the body; and this was repeated three times in the day. In the evening, the patient was put into an acidulated vapour bath. The next morning, the patient had perspired copiously; and he had slept, which he had not done since he was first attacked. Some spoonfuls of liquid had been swallowed; the muscles were less tense, and the convulsions were less frequent and of shorter duration. Twenty grammes of chloroform were ordered to be rubbed in during the day—a third part each time. The treatment was continued

during five days; the perspiration continued; and, on the sixth day, there was nothing remaining but some general languor and great weakness, from which the patient soon recovered under proper diet and exercise.

Dr. Morisseau does not hence infer that chloroform is entirely preferable to quinine in tetanus. Both may be good in certain cases—perhaps in all; but we may be permitted to prefer the shortest and most certain remedy. He would, in other similar cases, again use chloroform, sometimes giving quinine at the same time.

Dr. ARAN has appended the following note to the communication of which the above is an abstract.

The case related by M. Morisseau is, as far as we know, the first in which friction with chloroform has been successfully employed in tetanus. The good effects which it has been shewn to possess in combating cholera cramps, painful contractions, choreic spasms, etc., would lead one to expect something from it in tetanus. Frictions with sulphuric ether have already been used in this disease, as appears from the following case, related by M. TIBALDI in a recent number of the *Gazetta Medica Lombarda*.

A labourer, aged 28, was attacked with tetanus, two days after lying on the damp ground, while in a state of perspiration. When first seen by M. Tibaldi, he was in a state of well-marked tetanus. In pursuance of the treatment generally adopted in that country in tetanus, he was bled eight several times during five days, sometimes to as much as twenty ounces; and above a hundred leeches were applied to the painful parts. On the sixth day, the state of the patient being still severe, M. Tibaldi had the loins rubbed twice with sulphuric ether; the patient was bled a ninth time, and took half a grain of acetate of morphia. The frictions put a stop to the spasmodic twitchings of which the patient complained. The next day, he was again bled; and an ounce of ether was rubbed over the back and neck. On the third day, the patient could sit up; and, in about ten days, he was convalescent.

DOES THE FREQUENCY OF ANAL FISTULÆ IN PHTHISICAL PATIENTS SUGGEST ANY THERAPEUTIC IMITATION OF A SIMILAR DRAIN?

It is well known, that fistula in ano is often met with in phthisical patients; and it is also pretty generally admitted, that the pulmonary disease is accelerated by the cure of the local malady. From these considerations, M. BORSON suggests that benefit may be derived in phthisis by artificially establishing an emunctory in the neighbourhood of the anus. He recently made an experiment of this kind upon a man in the second stage of phthisis at the Hôtel Dieu of Chambery. The symptoms are said to have been much relieved; but he left the hospital too soon for the results to be reported in a satisfactory manner. [*Journal de Méd. et de Chirurgie*, May 1851.]

INVOLUNTARY EXCRETIONS OF THE INSANE, TREATED BY STRYCHNIA.

M. GIRARD, physician to the lunatic asylum at Auxerre, mentioned, at the meeting of the Académie de Médecine, on June 10, that he had employed sulphate of strychnia as a remedy for involuntary evacuations in the insane. Two centigrammes (about gr. $\frac{1}{3}$) are mixed with 30 grammes (463 grains) of simple syrup. The daily dose of this compound is at first five grammes, gradually increased, sometimes to as much as thirty or forty grammes. M. Girard has not observed cerebral congestion to be produced in any case, when the medicine was carefully given. In three cases, he pushed the dose to a hundred grammes; and then some convulsive movements were produced, which readily disappeared when the medicine was discontinued and warm baths were used. [*Gazette Médicale de Paris*, June 14, 1851.]

TREATMENT OF ACUTE RHEUMATISM BY CROTON OIL.

During the last five years, Dr. G. L. Upshur, of Philadelphia, U.S., has treated eleven cases of acute rheumatism with croton oil, with the most satisfactory results. The patients were purged daily, or every second day, according to the severity of the disease, until the inflammatory symptoms were completely subdued. He says, in the *Philadelphia Medical Examiner* for October 1850:—

Of croton oil as a purgative in acute rheumatism, I am prepared to speak in the highest terms. Cathartics have always stood in the front rank of remedies in this disease, but I am disposed to believe that the efficacy of croton oil does not depend entirely upon its cathartic properties. It possesses a power over the disease beyond these, and apparently not depending on them; for other cathartics, which act as powerfully and as promptly, producing similar watery stools, do not bring a like amount of relief to the patient. I do not say that it is a specific, for I am not a believer in the doctrine of specifics in medicine; I merely desire to state, that, after a fair trial, in a number of cases accurately observed, where there was scarcely a possibility of falling into error, I believe that the croton oil is the best single remedy in the treatment of acute rheumatism. I speak not of chronic rheumatism, nor of that which results from a syphilitic taint, but of the acute inflammatory affection. In all the eleven cases, in which it was given, its beneficial attempt was palpably evident.

Dr. W. A. Thom, to whom I am indebted for the first hint in regard to the value of croton oil in this disease, informed me, about two years ago, that he had used it in several severe cases, and uniformly with success. [*Charleston Medical Journal*, March 1851.]

SURGERY.

FRACTURE OF THE ANTERIOR PORTION OF THE OS CALCIS.

Dr. Ruschenberger, Surgeon U.S. Navy, records the following case in the *Philadelphia Medical Examiner* for May 1851, p. 289.

Case. On the 24th Nov. 1850, Lieutenant W. (aged 32, athletic, weighing 190 lbs.), while in a paroxysm of mental aberration, leaped from the wall enclosing the U.S. Naval Hospital at New York, at a point where it is fifteen feet high, and alighted on his soles, on the hard gravel-paved side walk of the street. At the time, he was in his slippers. At first, he was insensible. When he recovered from that state, he said to Dr. R. that he felt as if "all the bones of his feet were crushed". Both ankles and feet were contused. Distinct crepitus was heard on moving the left foot. Below the malleolus externus, and a little anterior to the axis of the fibula, was a projection caused by a fragment of bone, estimated to be about a cubic inch in size, which was seized between the thumb and fingers, and moved easily, but not extensively, beneath the skin. Moving this fragment caused distinct crepitus and severe pain. The toes and metatarsus could be turned inwards, on a plane with the sole, almost to a right angle, owing to a partial separation of the metatarsal from the tarsal bones. There was nothing abnormal observed in the motions of the astragalus upon the tibia. There was no displacement of the posterior extremity of the os calcis; but the patient stated subsequently, that, when his consciousness returned, he found the heel bone drawn up out of place. There was no fracture of the tibia or fibula. Pressure posterior to the cuboid shewed an unusual yielding space in that region. Cold water dressings were applied to the feet and ankle; and a fourth of a grain of the meconate of morphia was administered on the 30th, the sixth day after the accident, the left ankle and foot were carefully examined. The anterior and external portion of the os calcis, which articulates with the os cuboides, was fractured and separated; the fragment lying below, and pro-

jecting externally beyond the malleolar process of the fibula. Firm steady pressure by the thumbs, directed forward and inward, reduced it, the fragment suddenly slipping into place. A roller was turned firmly around the foot, and over a compress placed upon the fractured portion. The entire leg and foot were then encased in felt, previously softened, and the whole dressing retained in place by a roller. On the 2nd December, "although unable to bear either foot in a pendent or vertical position without discomfort and pain", he was conveyed home at his own earnest request; and Dr. Ruschenberger "has been told that he is not lame".

Remarks. Dr. R. says: "The accident was probably caused by the sole of the foot coming in violent contact with some inequality, such as a small pebble, opposite to the anterior extremity of the os calcis.

"About a week after this fracture, a boy of seventeen years of age, weighing probably less than a hundred pounds, attempted to desert, and leaped the wall at the same point. In his case there was severe contusion and sprains of both ankles, but no fracture. He was able to limp away nearly a half mile." (p. 291.)

DISLOCATION OF THE OS SCAPHOIDES.

Dislocations of the bones of the foot are rare, in consequence of the great strength of the ligaments by which they are bound together, and the very limited motion of which they are capable. The following case is therefore possessed of some interest: it is reported by Dr. Norris, of the Pennsylvania Hospital, in the *Pennsylvania Medical Examiner* for May 1851, p. 303.

Case. The patient, a large, pale, sickly man, was brought to the hospital on the 13th Feb. 1850. While in the delirium of fever, he had leaped from a window about twenty feet high, alighting on the ball of the foot. There was a very marked prominence on the upper surface of the foot, immediately posterior to the articulation of the first metatarsal bone; and the man complained of pain on attempting any movement of the foot. The integument was tense, but there was no external wound. An assistant having been directed to secure the leg, reduction was effected by placing the left hand on the foot, immediately in advance of the leg, while the right hand firmly grasped the extremity of the metatarsal bones, at the same time that the thumb was pressing back the prominent bone. Strong traction having been made, the bone suddenly yielded, slipped into its place with a snap, the patient screamed with pain, and the deformity at once disappeared. A figure-of-8 roller was applied over the foot, and the man closely watched. At the end of twelve hours, this was removed; but as there was no increase of swelling, it was reapplied. The man remained several weeks under treatment for his fever. On his dismissal, he was able, with a cane, to walk without difficulty.

CASE OF GLOSSITIS.

The following case, by Dr. C. T. Quintard, of Roswell, Georgiana, U.S., is quoted by the *Boston Medical and Surgical Journal* from the *Southern Medical and Surgical Journal.*

Case. On September 23, Dr. Quintard was called in consultation to see J. F., a wagoner, aged 28, who had been ill four days. Six weeks before, a dentist, in attempting to extract one of the larger molars on the right side, had broken off the crown, and left the root. For ten days a continuous pain was felt; it then became intermittent until the 12th instant, when it ceased. On the evening of the 19th, the pain returned; the patient applied a few drops of oil of cloves, and went to sleep. In the morning, the pain became severe, and the tongue was slightly swollen. During the 20th, he complained of pain in the back, and general *malaise*. In the evening, Dr. P. visited the

patient, prescribed a cathartic, and applied a blister about the anterior part of the neck.

Sept. 20*th.* The tongue, sub-lingual, and sub-maxillary glands, were much swollen; pain severe; the masseter muscles were rigid, particularly the right.

Sept. 22d. The patient was unable to articulate; tongue protruded between the lips, tense, red, and painful to the touch; breathing laborious; brow bathed in perspiration; surface in other places hot; pulse 100, and full; saliva flowing profusely. He had passed a restless night, with constant pain. He had had no dejection since the operation of the cathartic given on the 19th. He was bled to 25 oz.; a large dose of Epsom salts was administered, and a poultice of hops and meal applied to the neck. He was much relieved by the bleeding, and was able, after some effort, to swallow the salts. 6 P.M. Breathing easier; tongue not so painful; salts had operated well. The pulse being about the same as before, twenty-five ounces more blood were drawn, together with six or eight ounces by cups under the clavicles. At 9 o'clock, there was a free discharge of fetid pus from an abscess at the base of the tongue.

Sept. 23*d.* The patient was sitting up, quite cheerful. No pain; tongue not so much swollen, nor much lessened. The finger could not be passed back to the base of the tongue. Chicken-broth was ordered. In the evening, the discharge had ceased, but was renewed by using a probe.

Sept. 24*th.* The patient slept well till towards morning, when there was a recurrence of pain. The right side of the tongue was now more swollen than the left; and as there was evidently another abscess forming, and the pulse was again full and frequent, half a grain of tartar emetic was given every two hours. 5 P.M. He had taken but two doses of the tartar emetic, which acted freely on the bowels, as well as producing the desired effect. At 2 o'clock, the second abscess discharged much offensive pus. A cup of strong green tea, and half a grain of morphia, were ordered to be taken at 8 o'clock.

Sept. 25*th.* The patient was convalescent.

Among the causes which predispose to glossitis, are reckoned compression of the jugular veins (Stahl); ptyalism (Slegel, Frank, Hosack); rubbing the head with mercurial ointment, small pox, etc. (Trincavalleus). Among the occasional causes, are wounds, laceration, and contusions of the tongue; the application of emetic to the organ, burns; while the most frequent is the action of acrid or acro-narcotic substances on the tongue. Such effects have been produced by the juice of the daphne mezereon, by tobacco leaves, and by the sting of wasps, bees, and other insects. Dupont relates a case of a young man who, for a wager, took two bites of a toad, and was speedily attacked with severe glossitis. [Vide *British and Foreign Medico-Chirurgical Review*, July 1850, p. 54.]

The treatment of this disease is generally simple, consisting of venesection, scarification of the tongue, or incisions made parallel to the raphe, the introduction of ice into the mouth, and, if the patient can swallow, the administration of cathartics or laxatives. Emetics are highly commended by Dupont, Ruggi, Wettingius, and others, in the earlier stages.

OBSTETRICS.

PARTIAL PARALYSIS IN THE LATTER MONTHS OF PREGNANCY.

At a meeting of the Edinburgh Obstetrical Society, Dr. GRAHAM WEIR shortly detailed the history of two cases of paralysis of the sensitive nerves of the fingers, coming on in the latter months of pregnancy. In the first, the disease came on gradually at the ninth month; the fore-finger and thumb of the right hand were the parts affected. So complete was the palsy, that the patient was unable to feel a needle between the fingers. Immediately after delivery, sensation returned, and had continued perfect ever since. In the second case, the disease came on about the eighth month of pregnancy; the

parts affected were the thumb and two first fingers. The peculiarity in this case was, that sensation was not absent, but perverted. A needle placed between the fingers felt by the patient as if it were (to use her own words) of the thickness of a common fire-poker. In this case, recovery was not so immediate as in the former. After delivery, she suffered intense intermittent pain in the middle finger, the paroxysms being synchronous with the after-pains. This state lasted for four days; it then gradually subsided, and she became able to use the hand as formerly.

Several similar cases were mentioned by other members of the Society. [*Monthly Journal of Medical Science*, May 1851.]

PROFESSOR SIMPSON ON FISSURING AND LACERATION OF THE STRUCTURES OF THE PERINEUM AND CERVIX UTERI IN NATURAL LABOUR.

As the result of a long series of observations, Dr. SIMPSON has drawn the following conclusions :—

I. Fissuring and laceration of the cervix uteri and perineum are not, as is generally conceived, rare lesions during labour; on the contrary, they are very common occurrences; especially in primiparous labours.

II. These lesions are not, as has been often alleged, necessarily the result of mismanagement, but they occur constantly in practice, despite every modification of management; and in cases also in which no kind of management has been adopted.

III. Evidence of the great frequency of laceration of the anterior structures of the perineum is furnished by,—1. Almost every careful autopsy of women after delivery, whether assisted or not assisted during their labour; 2. By the contracted or shortened state in which the perineum is almost always found, when vaginal examinations are made for uterine disease in women who have borne a family; and, 3. By the fissuring or laceration itself being usually traceable (under careful tactile examination), particularly in first labours, when that examination is instituted in the interval of pain, immediately before the passage of the child's head, or after its birth.

IV. Lacerations of the perineum may be often felt beginning in the form of slight roughish rents or fissures upon the mucous surface of the perineum, and these may extend either backwards or forwards; and if they extend forwards, they at last run over the edge of the perineum, and along its cutaneous surface; the mucous and cutaneous structures of the perineum being thus sometimes lacerated, while its middle, cellular, and fascial tissues are comparatively entire, or at least not so deeply and extensively injured.

V. The proper management and support of the perineum no doubt modifies and diminishes this form of perineal lesion; but it fails far more frequently than is generally supposed in entirely preventing it.

VI. The evidence of the frequency of fissuring of the os and of the lower or vaginal portion of the cervix uteri is the same in character, and consists principally—1. In the frequency with which slight laceration of the edges of the os, and of the mucous and middle coat of the cervix, is detected in autopsies after natural labours, and particularly with first children; and, 2. In the permanent marks of its previous occurrence, as exhibited in those cicatrices and irregularities of the cervix uteri, which anatomists have long empirically, but correctly, laid down as proofs that they, in whose bodies they are found, have been previously mothers.

VII. Fissures and lacerations of the vaginal portion of the cervix uteri not unfrequently occur to a very considerable extent, in cases in which the tissues of the cervix have been rendered rigid by previous inflammation, by carcinoma, or by other morbid causes; and, in such cases, this fissuring or laceration, if limited to the lower or vaginal portion of the cervix, seems to be accompanied with little or no danger. [*Monthly Journal of Medical Science*, May 1851.]

MATERIA MEDICA AND PHARMACY.

MERCURIAL INHALATION BY SMOKING CHEROOTS AND CIGARETTES.

The inhalation of various medicines along with the smoke of cigars or cheroots, has been more than once recommended in this JOURNAL. In prescribing the method, the physician must take care that the patient be clearly told that the smoke is to be drawn into the lungs ; and the mode of doing this must be properly explained to him.

MR. J. H. RICHARDS, of Philadelphia, writes as follows in the *Medical Examiner* for June 1851 —" I have been informed by a gentleman of intelligence, who has resided for a long time in China and Manilla, that mercury, which is there regarded as a specific in the severe forms of hepatic disorder incident to the climate (and leading to its employment to an extent that would be considered extravagant by Europeans), is constantly exhibited in the following novel and peculiar manner. The black oxide is introduced into the Manilla cheroots, and, being inhaled, is thus presented in the form of vapour to the most absorbent surface in the body. The only difficulty is the inability of the physician to regulate the amount of effect. By intelligence on the part of the patient, however, this is obviated ; whereas its advantages are such as to obtain for it the preference in many cases over the ordinary method. *It certainly is a speedy plan of producing salivation.* I mention this fact, as it is interesting in itself, and may suggest other applications of the same principle." (p. 369.)

Would this plan be admissible in pneumonia ? Perhaps not. In syphilis, iritis, peritonitis, etc., we would urge upon our readers to make trial of this method of inhalation. Nothing can be simpler than the manufacture of mercurial cigarettes with the little machine in common use by smokers ; mingling the proper quantity of the black oxide, with some light and easily smoked tobacco. It may happen, however, that the nicotine is objectionable. In such cases, then, we would recommend the tobacco to be freed from this principle by maceration in acidulated water. It is right to state, that the smoking of mercurialised cigars is by no means, as Mr. Richards supposes, a novelty in the practice of medicine. The following formula was given many years ago by Bernard :—" *Cigarettes Mercurielles.* Bichloride of mercury, 4 centigrammes ; extract of opium, 2 centigrammes ; tobacco deprived of its nicotine, 2 grammes. Deprive the tobacco leaves of their nicotine by several macerations in acidulated water, wash them in fresh spring water, then dry them, and cut them up for making into paper cigarettes." These cigarettes are recommended *(L'Officine, par Dorvault)* in syphilitic ulcerations of the throat, mouth, and nose.

SAFETY OF ACETATE OF LEAD AS A MEDICINE.

MR. W. SWEETING, in the *Provincial Medical and Surgical Journal*, June 11, 1851, combats, as a vulgar prejudice, the assertion that acetate of lead is an active acrid poison. He expresses his belief, that no well-authenticated case is on record, wherein death has followed the administration of it, and he alludes to several cases recorded by Dr. Christison and Professor Taylor, in which as much as an ounce, and even an ounce and a half, were swallowed, and yet all the patients recovered. Mr. Sweeting then describes some cases of uterine hæmorrhage, bloody diarrhœa, etc., in which it has proved of the utmost value as a sedative astringent, given in five-grain doses, for many consecutive hours. One patient took as much as 576 grains of the acetate in sixteen consecutive days. Van Swieten gave sixty grains daily for ten days, and Mr. Daniel ten grains three times a-day, without any unpleasant effect, except a slight colic after the fourth dose. The largest dose given by

Mr. Sweeting was twenty grains; and in his experience of this medicine for fourteen years, he has never met in a single instance the ill effects usually ascribed to it. Being extremely liable to decomposition, acetate of lead should always be given *simply dissolved in distilled water*. These decompositions may have been the occasion of much mischief; and hence even opium is inadmissible. Care should also be taken to have the acetate very pure. In allusion to a fatal case, occurring in the person of a child, who took in small divided doses continuously given in the space of *nine weeks, thirty-three grains*, Mr. S. suggests the inquiry, whether minute doses may not have a tendency to accumulate in the system and produce its specific effects, whilst larger ones are carried out readily, and he adds,— "I more than half suspect that where acetate of lead, internally administered, has occasioned dangerous symptoms, the preparation has not been free from oxidation. It is the *oxide* which is injurious, and which, mixed with the cider in Devonshire, gave a cognomen to the colic prevalent in that county. The same obtains in painters' colic, from swallowing, owing to neglect of ablution, particles of litharge and red lead."

LIEBIG'S BEEF-TEA AND EXTRACTUM CARNIS.

Dr. William Beneke in the *Lancet* of January 4, 1851, strongly recommends—and, we think, for very sufficient reasons—Liebig's Beef-tea, when the patient requires to have administered, in small bulk, a good animal nitrogenous food. He quotes the following formula for preparing it, as given by Liebig :—"One pound of lean beef, free of fat, and separated from the bones, in the finely chopped state in which it is used for beef sausages, or mince-meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel, from the coagulated albumen and fibrine, now become hard and horny. Thus we obtain an equal weight of the most aromatic soup of such strength, as cannot be obtained even by boiling for hours from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker, by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh."

When beef-tea prepared in this way is evaporated in a water-bath, and cooled afterwards, it forms a brownish yellow extract, to which has been given the name of Extractum Carnis. In accurately following the above-described method of preparing the beef-tea, the quantity obtained out of six pounds of meat may be evaporated to three ounces, and those three ounces, after having cooled, form the "extractum carnis". One ounce of extractum carnis is therefore equal to thirty-two ounces of meat, whence it can easily be calculated how much of it is required for providing a patient daily with the constituent parts of three, four, five, six, or more ounces of meat. Dr. Beneke desires to see the extractum carnis introduced into the Pharmacopœia; and he mentions, on the authority of Dr. Von Breslau of Munich, that it is to be received into the *Pharmacopœia Bavariæ*. It is stated not to undergo any change for years, when kept in air-tight porcelain vessels.

REPORTS OF SOCIETIES.

SURGICAL SOCIETY OF IRELAND.

January 25, 1851.

Dr. Jacob in the Chair.

Case of Warty Ulceration of the Lower Extremity successfully treated. By Dr. Stapleton. M. W., labourer, aged 60, was admitted into Jervis Street Hospital, April 29, 1850, for extensive ulceration of the right leg, which he said had been pronounced incurable by several surgeons. Many years ago, whilst working in a quarry, his shin had been cut by the falling of a piece of stone. It was long before it healed, and remained healed but for a short period, when it again broke out, and continued gradually getting worse to the present time. The ulcer now measured upwards of three inches and a half in length, and seven inches and a half in breadth. Its centre seemed deeply excavated, but was not so in reality. It was covered with a dirty-yellowish substance, through which, on the inner side of the leg, there appeared several whitish warty eminences. There was a copious, thin, and very offensive discharge from its surface. The superior margin of the ulcer resembled that of a chronic ulcer of long standing. The inferior margin was surrounded by a wall of warty structure, in the widest part one inch and a half, and was fined down to an almost single wart on either side. A probe did not pass deeply by pressure on the ulcerated surface, nor through the warts on the lower margin. The patient's health was much impaired, his complexion was sallow, his appetite bad, and his sleep disturbed. The ulcer was treated by rest and position of the limb ; its surface was covered with lint steeped in lotions, varied as its appearance required ; strips of bandages were then applied, after the manner of a many-tailed bandage, and over all was a roller kept moistened by water. The ulcer was healed on the sixty-eighth day. The warts had now entirely disappeared. The constitutional treatment was mercurial and tonic.

Observations on a peculiar type of nervous fever, characterized by a functional excitement of the cerebro-spinal nervous centres. By Dr. McDowell. This fever is especially characterized by the existence of symptoms which denote a *functional excitement of the cerebral and spinal nervous centres*, especially of the latter. In most instances it attacks the young, having been met with in a large proportion of cases between the ages of twelve and eighteen. In no instance did the disease occur after the age of twenty-six, and, as far as was observed, one sex is not more predisposed to its influences than another. Dr. McDowell first met with cases of this affection in the latter part of the year 1846, the year in which cerebro-spinal arachnitis (or rather meningitis) appeared in this country epidemically to a limited extent ; and he had little doubt but that some examples of this peculiar fever occurring at that period were regarded as cases of meningitis.

Between the symptoms which attend this *functional* affection of the spinal cord, and those which usher in inflammation of its membraneous coverings, there will constantly be found the strongest resemblance. When the one affection is unusually prevalent, there is a more than ordinary tendency to the development of the other. In 1846, when inflammations of the membranes of the spinal cord were frequent, and in many instances terminated fatally, it was observed, that the symptoms of excitement of the spinal cord frequently became developed in the progress of cases of ordinary continued fever, without in any way tending to produce an unfavourable result ; and again, during the last few months, since fever complicated by the functional

affection of the medulla spinalis has become epidemic, there have been more cases of acute meningitis and myelitis than usual. It is therefore probable, that the epidemic influences which produce the one affection, have a tendency to induce the development of the other.

Since the year 1846, Dr. McDowell had been accustomed to meet with a few occasional examples of the disease, but during the last six months it had much increased.

In the *mode of invasion* of this disease, there is little variety to be observed. It is invariably ushered in by the usual symptoms of fever of varying intensity, but generally accompanied by more than the usual amount of *gastric irritability;* sometimes the vomiting is very distressing, and occasionally, but in a few instances only, the disease has been accompanied from the outset by marked depression and prostration of the vital powers, which amounted in one case to collapse, like that of cholera, and further resembled that disease in being attended by watery stools and vomiting of a whitish serous-like fluid. About the third or fourth day, in the majority of instances, a pecular group of symptoms become developed, which stamp this affection as different from any of the more ordinary forms of fever. These symptoms, which depend upon a *functional excitement* or *erethism* of the brain and spinal cord, may be thus enumerated.

1. *Exalted sensibility* of the cutaneous surface generally, but most highly developed in the integuments of the head, back of the neck, abdomen, and calves of the legs. 2. Severe *pains* shooting throughout different parts of the body, and most generally referred to the region of the spine, occiput, shoulders, loins, and lower limbs. 3. *Tenderness on pressure* over some portion *of the spinal column.* Sometimes the whole spine is intolerant of pressure, but more generally isolated points alone are thus acutely sensitive. The cervical portion of the column seems to be the one most generally thus affected. 4. *Rigidity of the muscles of the nape of the neck*, especially of the sterno-mastoid and trapezius muscles, which limits the motion of flexion of the head, and in some instances completely prevents it. Sometimes the erector muscles of the spine are similarly excited. 5. In many of these cases, there is *the peculiar expression of trismus*, particularly in the upper half of the face, the forehead being thrown into transverse wrinkles, and the eyes having the characteristic peering expression of that affection. 6. This fever is very often accompanied by *headache*, which is *referred to the occipital region;* or when more diffused, is most keenly felt in the posterior region of the head. 7. There is always present more or less of *epigastric tenderness*, sometimes the whole of the abdomen is intolerant of pressure, but this belongs in all probability to the augmented sensibility of the surface generally, and has its seat in the integument. This symptom, by its undue prominence, may give rise to the suspicion that peritonitis exists, and so mislead the practitioner. This is illustrated by one of the cases to be presently mentioned.

In none of these cases were there any indications of congestion of the intestinal or bronchial mucous membranes, but very often a short hacking cough with hurried breathing has been present, resembling that with which practitioners are familiar in cases of hysteria, and to be referred to the same source—viz., to functional excitement of the spinal cord.

In addition, there are the symptoms of ordinary continued fever, a pungently hot skin, and a greatly accelerated circulation, the pulse ranging from 120 to 140 (in one case mounting up to 150), *but without the secretions being much vitiated*, the tongue continuing moist, the bowels acting naturally, and the urine not being sensibly altered in any of its qualities. In some cases there has been slight delirium at night, but in all of them there was observed an *irritability of disposition* and an amount of *anxiety* and of *restlessness* quite disproportional to the other symptoms, but which plainly indicated a peculiar disturbance of the sensorium.

As to the *duration* of the disease, it was observed in a large number of the cases that convalescence occurred on the eighth day. In others the disease lasted for ten days, and in a few instances only was convalescence longer postponed. In some the occurrence of perspiration marked the crisis of the disease. In one case jaundice proved critical, whilst in the greater number no marked crisis occurred, but a rapid subsidence of the disturbance of the nervous centres preceded by a short interval the disappearance of fever.

In no one instance did this fever terminate fatally.

In some cases, the fever was of a low adynamic character, and in these a tardy convalescence resulted, and in one instance cancrum oris supervened, but the child ultimately recovered.

Relapses did not belong to this type of fever, in which it was contrasted with a bilious form of fever latterly very prevalent, in which relapses were extremely common.

Lastly, instead of constituting a distinct type of fever, the symptoms of spinal irritation were observed to occur in the course of maculated typhus or of bilious relapsing fever.

The following cases, which are very briefly described, will illustrate many of the preceding remarks :—

Case I. Jane Fox, aged 22, admitted August 10th (ill two days), labouring under the symptoms of ordinary continued fever. Two days subsequently (the fourth of her illness), she complained of severe pains all over her body, aggravated either by pressure or by motion. The seat of this *exalted sensibility* was the skin; the head was rigid; the muscles of the neck hard and contracted; the head could be but very slightly flexed, and the attempt gave great pain; there was a constant pain in the occipital region, and a diffused tenderness of the scalp; the nape of the neck and the calves of the legs were especially tender to the touch.

13th *(fifth day)*. Patient is almost unable to move from extreme "soreness all over her"; she is even unwilling to allow herself to be touched by the nurse; there is much pain in the back complained of; pulse 130; tongue moist and furred.

14th. Diminution of all these symptoms. 16th (*eighth day*). Convalescent.

In the next case, the disease began with great violence, and presented at first many of the symptoms of cholera.

Case II. Anne Collins, aged 9, admitted August 9th into Dr. Corrigan's ward: *ill twenty-four hours*. On admission, there was frequent vomiting and purging; the discharges from the bowels were thin and serous, and collapse very quickly supervened. Counter-irritation, external warmth, and stimulants were freely employed. The vomiting and purging ceased, and the *third day* reaction was fully established, and slight fever was present. On the *fifth day* exalted sensibility of the surface was present; the legs were especially tender to the touch; the head was rigid, and could not be bent; and the trapezius and sternomastoid muscles were contracted and tender; the little patient was peevish, restless, and irritable to the greatest degree; the pulse was extremely rapid, and the surface of the body very hot. *Eighth day*, convalescent.

In this case, extreme debility remained, with remarkable pallor of the face; and, after a few days, gangrenous sloughing of the gums occurred. The disease, however, was arrested before the cheek became implicated; and, after a tedious illness, the child ultimately recovered.

Case III. Michael Maguire, aged 15, admitted Sept 18th. On admission, there was much fever present, although the boy was only ill a *few hours*. On the *third day*, frequent vomiting was present, with excessive tenderness of the epigastrium. There was complaint made of severe pain in the occiput and in the nape of the neck, the muscles of which were rigidly contracted. The patient complained of flying pains all over him, and there was tenderness to the touch of the nape and of the *right* leg. The face had much of

the aspect of tetanus. There was a singular amount of anxiety and of despondency present. The breathing was hurried and hysterical.

Fifth day. There was little or no improvement; the scalp was very tender to the touch, and the face still wore the tetanoid expression; there had been little sleep, with delirium, but there was no intolerance of light. The circulation was greatly hurried, and the skin was very hot; but the tongue was moist, and the bowels acted naturally.

Sixth day. The patient had slept well, and was better in every respect.

Eighth day. Skin cool and perspiring; no pains anywhere; convalescent.

Case iv. Anne Gahan, aged 24, admitted October 2nd; her illness began with shiverings, followed after two days by vomiting and shooting pains throughout the body. The day of admission was the sixth of her illness; there was much fever present; the skin was pungently hot, and the pulse beat 130 in the minute. There was great pain in the shoulders, back of the head, and spine, aggravated by the least motion; the head was stiff, and the muscles of the nape rigid. The patient screamed loudly when the least pressure was made over the dorsal vertebræ. The legs also were acutely sensitive when touched. The upper part of the face presented the appearances of trismus, the forehead was wrinkled transversely, and the eyes were more than half closed. There was no delirium or subsultus tendinum. The tongue was moist and furred. The slightest pressure on the epigastrium was intolerable, and the abdomen generally was tender when pressed on.

Seventh day. The pain was more localized in the occipital region, but the patient felt much relieved and could move more freely; the pulse was reduced to 100. The conjunctivæ were yellowish, and the epigastrium was yet tender.

Eighth day. Pulse 80; patient is deeply jaundiced, but feels quite free from pain, and there is no longer any over-sensitiveness of the surface; debility.

Ninth day. Convalescence established; recovered rapidly.

Case v. In this case the excessive sensibility of the abdomen with fever caused peritonitis to be suspected. Rose Clinton, aged 8, admitted November 20th; ill three days; for five days after admission the symptoms of mild continued fever were present. On the eighth day of her illness (Nov. 25th) she complained greatly of pain in her abdomen, the surface of which was extremely intolerant of pressure. She lay on her back, and was unwilling to move or to allow herself to be moved. The pulse was 122 and small, and much fever was present. The clinical clerk on duty suspecting peritonitis, leeched the abdomen, and administered mercury. On the next day (the ninth of her illness) the true nature of the case was manifest, for the signs of spinal irritation had become fully developed. There was pain in the back of the head and neck. Rigidity of the trapezius and sterno-mastoid muscles with consequent inability to flex the head fully. There was also "exalted sensibility" of the cutaneous surface generally to a remarkable extent. The abdomen was still tender, but no longer predominantly so. Her face was expressive of pain and suffering.

Thirteenth day. Convalescence established.

Case vi. J. Gallagher, aged 14, admitted Nov. 2nd; ill four days. He attributed his illness to over fatigue from excessive walking. When admitted he laboured under fever with excitement of the spinal nervous centre. The pulse was 120; the skin was pungently hot; the epigastrium was extremely tender; there was excessive "soreness" of the cutaneous surface, especially of the legs; the muscles of the nucha were rigid, preventing the head from being flexed; the face bore the expression of trismus in a marked degree; the breathing was very hurried, and the patient had a short frequent ringing cough, unaccompanied by any expectoration. Careful examination failed to discover any evidences of thoracic disease.

Seventh day. There was a critical perspiration; from that period convalescence was established.

The following were Dr. M'Dowell's conclusions.

1. That there is a type of fever characterized and accompanied by a functional affection of the cerebro-spinal nervous system.

2. That the predominance of "spinal irritation" distinguishes this affection from the ordinary forms of fever in which "cerebral symptoms" are of more common occurrence.

3. That the symptoms which denote excitement of the spinal cord are the following :—morbid exaltation of the cutaneous sensibility—pains along the course of the spinal nerves—spinal tenderness—rigidity of the muscles of the nape of the neck—the expression of trismus—neuralgic headache, and headache chiefly referred to the occipital region—gastric irritation, and sometimes irritation of the pulmonic branches of the vagus nerve.

4. That these symptoms present the strongest contrast to those of typhus, in which we generally meet with a tendency to stupor, listlessness, deafness, and other evidences of blunted sensibility.

5. That the disease hitherto has proved mild, tending to recovery on or about the eighth day; that relapses do not occur; and that typhoid symptoms never are observed.

6. That instead of constituting a distinct type of fever, these signs of spinal irritation may occur in the progress of other fevers, and without tending to an unfavourable result.

7. That this affection is liable to be confounded with hysteria, peritonitis, gastritis, or gastric fever, or with cerebro-spinal meningitis.

8. That the combined symptoms of headache and epigastric tenderness which in other fevers are best treated by local depletion over the stomach, will in these cases be most effectually relieved by the application of leeches to the posterior region of the head; and for this reason, that in the type of fever under consideration, the gastric irritability and epigastric tenderness depend upon a functional lesion of innervation, whilst in other instances it is the brain which sympathizes with a deranged gastro-intestinal mucous membrane.

Observations on the Statistics of Venereal Sores in the 57th Regiment. By A. C. Gordon, M.D. During the year, from 1st April 1849, to 31st March 1850, the regiment having been very much detached, the average strength at head quarters was only 408; yet out of this number the aggregate period during which such of the men as were affected with local venereal sores were in hospital amounted to 1210 days, making a loss to the state on this account of work equal in value to £65 10*s.* 3*d.* The sick list on account of venereal diseases was *below* rather than *above* the general average throughout Ireland; but supposing, that for every 500 soldiers there is a loss to the state, in consequence of the prevalence of local venereal sores, of the work of 1210 days, then as the army in Ireland amounts, at the very smallest computation, to 24,000 men, we have an annual cost to the state of £3,120 on account of this one form of disease.

During the year ending 31st March 1850, the following numbers were treated on account of venereal diseases in the head-quarter hospital out of an average strength of 408—viz.:

Species of Venereal Disease.	Number admitted.	No. of days in hospital.	Amount of Soldiers' pay.
			£ *s.* *d.*
Syphilis primitiva	53	1210	65 : 10 : 3
——— consecutiva	13	462	25 : 5 : 11
Ulcers on penis non-syphilitic	2	43	2 : 3 : 7
Bubo simplex	10	281	15 : 4 : 5
Gonnorrhœa	32	481	26 : 1 : 1
Hernia humoralis	3	42	2 : 5 : 7
Total	113	2519	136 : 10 : 9

The forms of venereal ulcers that had been observed to prevail since the return of the regiment from foreign service, on 13th Sept. 1846, to 31st March 1850, may be reduced to six.

Of these, the first, or "Hunterian chancre", is a round excavated ulcer with hard base, edges a little prominent, and I would add, its interior having, when closely examined, a somewhat reticulated or honey-combed appearance. The second is a superficial ulcer without hardness, with elevated edges, whitish or reddish surface, and no appearance of granulations. The third is also a superficial ulcer, destitute of hardness, but its centre is considerably elevated—generally of a bright red colour, and fungous appearance. The fourth is mere excoriations of the glans and prepuce, attended by more or less purulent discharge. The fifth is the phagedenic sore, having a corroding appearance, without hardness or granulation, and increasing rapidly in size. The sixth is the sloughing ulcer, which first commences in a small black spot, after which sloughing extends from this point to an indefinite depth below the surface.

There are cases in which the local ulcer assumes so anomalous an appearance as to render it a difficult matter to refer it with precision to either of the above classes; while again, it not unfrequently happens that one and the same ulcer may, during its continuance, manifest in succession the more essential characters of two or more of those just described.

The total number of admissions on account of the various forms of venereal ulcer, now briefly described, were, during the entire period, as follows :—viz., 55 of No. 1; 106 of No. 2; 20 of No. 3; 20 of No. 4; 11 of No. 5; 3 of No. 6; and 27 not definitely described; making in all an aggregate of 242 cases.

The greatest number of admissions took place during the first half year that the regiment was at home; 79 having occurred between the 13th of September 1846, and the 31st of March 1847, out of an average strength of 715. During the following year, on the contrary, the ratio of admissions was smaller than in any other corresponding period; 56 cases only having occurred in an average strength of 818. In the two succeeding years, the admissions on account of primary sores were, respectively, 54 and 53, in an average strength of 408.

Different forms of ulcer seemed to prevail at different stations occupied by the regiment previous to its arrival in Dublin; thus, during the few days that it was quartered at Chatham, three cases came under observation, and of these one was a *Hunterian* and one a *phagedenic* sore, the third being a simple superficial sore, such as is characterized as No. 2. At Canterbury and Dover, the first form of ulcer (Hunterian) constituted a little more than one-fifth of the admissions; at Windsor and Hull, about one-twelfth; while at Enniskillen, during the two years that the regiment remained there, this form of ulcer formed, in the first, one-third of the admissions; and in the second, one-fourth.

Of the 242 cases of primary sores that came under observation during the period referred to, 192 were treated without the constitutional employment of mercury; and of this number, six were followed by "secondaries", while of fifty cases in the treatment of which mercury was administered constitutionally, *secondaries* occurred in four. The only forms of primary ulcers that were followed by constitutional or secondary symptoms, were the first, or Hunterian, the second, or superficial, and the fifth, or phagedenic. Of the four cases of Hunterian chancre that were followed by secondaries, three had been treated without mercury, and one with mercury. Of the three first mentioned, the form of secondary affection was, in the first, "a vesicular eruption, and nocturnal pains in the limbs"; in the second, "red spots upon the skin, intermixed with small tubercles"; and in the third, which was complicated with phymosis, "condylomata" supervened. In the fourth case, which in the first instance had been treated with mercury, the secondary affection consisted in "aphthous sores in the mouth, and eruption", although of what precise nature did not distinctly appear.

Of the three cases of the second form of ulcer that were followed by "secondaries", all had been treated for the primary affection without mercury; one of these was complicated with gonorrhœa, and there was at the same time an incipient bubo in the left groin, which however terminated in resolution. In this instance, the particular secondary affection that supervened, was "a squamous eruption". The other two were uncomplicated, and in them the secondary affection was also "squamous eruption" in one; in the other, there was an eruption, but of what particular character is not stated.

On the three cases of phagedenic ulcer that were followed by "secondaries", mercury had previously been employed constitutionally in the treatment; and the characters of the secondary affection varied in all. Thus, in the first case, which was uncomplicated, the secondary disease was a "squamous eruption". In the second, which was also uncomplicated, the secondary disease consisted in "superficial ulcers of the tonsils, and a *pustular* eruption"; and in the third, the patient had shortly before been treated (without mercury) for an Hunterian chancre, which appears to have healed without any complication. On his readmission with phagenedic sore, there was an incipient bubo in the left groin, which however did not suppurate. Mercury was employed constitutionally, and the secondary disease that followed was "a *papular* eruption, and enlargement of the cervical glands."

In none of the cases where the local sores were subsequently followed by "secondaries", did suppurative bubo occur; for in the two cases complicated with enlargement of the inguinal glands, the inflammation terminated in resolution.

Of the 242 cases of local ulcer, treated in the regimental hospital, buboes occurred in 68; and of this number, the complication was in the right groin in 22; in the left, in 33; in both sides, in 7; and in 6 cases, the precise side affected is not stated. Of the 192 cases treated without mercury, buboes occurred in 53; being in the proportion of 3·62; and 6, as has already been stated, were followed by "secondaries", being 1 in 32. Of the 50 treated with mercury, bubo occurred in 15, or 1 in $3\frac{1}{3}$; and "secondaries" supervened in 4; being 1 in $12\frac{1}{2}$. The average number of days that the 10 cases of constitutional symptoms were in hospital was 24; the most obstinate one having been 55, and the slightest only 3.

March 8, 1851.

Dr. Jacob in the Chair.

Case of Secondary Cancerous and Encephaloid Disease. By Mr. Banon. Case. On the 19th of May, 1849, P. F., labourer, aged 40, was admitted into hospital. He had a cancerous wart on the under lip on the right side, presenting the characters of this disease in an early stage. He first observed it a few weeks previously, and attributed it to smoking. His general health was good, and the glands in the infra-maxillary region and elsewhere were not enlarged; it was hence considered to be a case favourable for operation. In seven days afterwards the man was discharged apparently cured, and with a very healthy-looking cicatrix.

In January following (a period of about eight months) there was, *for the first time*, observable a small hard swelling at the angle of the jaw on the right side; and the patient was again admitted to hospital on the 31st of January, 1850.

The swelling increased, and an abscess soon formed, which at first discharged healthy pus, but in a little time gave rise to a deep unhealthy-looking excavation. For a time the disease would appear to be arrested, but would soon break out with renewed violence. The ulcerative process, combined with sloughing, at length destroyed most of the soft parts on the right side of the neck. An immense cavity existed, at the bottom of which the great vessels of the neck could be distinctly seen. The danger of a fatal and

sudden hæmorrhage was now imminent, but in a little time small granulations sprung up, by which the denuded vessels were covered, and the danger of hæmorrhage obviated. An excessively copious ichorous discharge took place constantly, and the patient's strength rapidly gave way. He, however, very seldom complained of pain. He became much attenuated, and died on the 21st of last September. About a month previous to his death, a tumour showed itself in the opposite side of the neck, which was evidently soft cancer or medullary sarcoma. The submaxillary and part of the parotid glands were at this time completely dissected, and laid bare by the ulceration. Their function was nevertheless carried on without impairment. The *straw-coloured skin* mentioned by French authors was at this period well marked in the case of the patient.

Remarks. It was worthy of remark, that the disease should have remained so long quiescent. From the time of the operation in May 1849, until January 1850, no sign of a return of the disease could be observed; and if we look on this as a second occurrence of cancer, we must suppose that the poison had been conveyed from the cancerous wart to one of the submaxillary glands previous to the operation, and there remained latent for eight months. We should, in even the most favourable cases of carcinoma of the lip, as well as elsewhere, make a most guarded prognosis as to the curative effects of operations. The disease may have originated a second time in the submaxillary region, and the last affection may have had no direct connexion with the first. The occurrence of the cerebriform cancer in the opposite side of the neck in the latter stage, was a remarkable evidence of the close connexion between the different forms of cancer. No examination of the internal organs could be made.

March 22, 1851.

Mr. Trant in the Chair.

Case of Punctured Wound in the Abdomen: Recovery. By H. C. Field, M.D.

Case. On the 22nd of November, a gentleman, while sitting at dinner, in a fit of irritation, exclaimed that he was tired of his life, and immediately stabbed himself with a carving knife. On entering his room, Dr. Field perceived the floor covered with blood, and the patient extended on a sofa in a corner of it, apparently lifeless. He could not feel any pulse. He immediately obliged him, with great difficulty, to swallow some brandy. Blood was flowing profusely from a wound in his abdomen, to the left side of, and near to, the umbilicus. The blood, which was of a dark colour, flowed freely in one continued stream, so as to threaten immediate death. Having failed to suppress the hæmorrhage by firm compress and bandage, Dr. Field introduced to the bottom of the wound a dossil of lint, the end being kept outside, and applied firmly over it a graduated compress and a broad bandage. This arrested the further flow of blood, and a cordial draught, with forty drops of laudanum, was then administered. A feeble tremulous pulse at the wrist could now be felt, but the patient appeared in a sort of faint. He was bathed in a cold sweat, his extremities lay still and motionless, he vomited at intervals, and his urine and bloody fæces passed unconsciously, and his respiration was slow and laboured. In this state he remained for seven hours. About this time the vital powers showed a disposition to reaction. He expressed, in a few broken accents, the general uneasiness, and complained of pain and numbness in the lower extremities, particularly in the left; this, with restlessness, disturbed him during the remainder of the night, which was passed without any sleep, notwithstanding an anodyne.

Nov. 23rd. A medical attendant remained with him during the night. There was no recurrence of hæmorrhage; he still appeared in a state of extreme debility, and felt great nausea, which occasionally increased to hic-

cough and vomiting; he also complained of numbness and pain, extending down the left limb to the foot; there was slight tenderness about the wound on pressure; pulse 120, feeble, and irregular. To relieve the state of the stomach, as well as to allay the general irritability, and ensure perfect rest, Dr. Field directed the saline effervescing mixture every four hours, with fifteen drops of laudanum, also fomentations to the abdomen. *Evening.* He still complained of pain and numbness in the thigh and leg; the abdomen was more tender; there was thirst; pulse 110 and feeble; tongue white and furred; skin hot and dry. He was ordered to continue the draughts at longer intervals, also the use of ice, and the fomentations every four hours.

Nov. 24th. He had some quiet and refreshing sleep during the night, and felt himself relieved; had had two stools, each containing a large quantity of dark clotted *blood;* pain and numbness in the left limb not so troublesome; abdomen tender on pressure. Ordered the fomentations to be repeated.

Nov. 25th. He had several evacuations, each containing a quantity of clotted blood; fever much less; pulse 90; tongue foul; pain and numbness in the extremity still distressed him; there was no pain about the wound; the dressings came away, when a quantity of *fæculent* matter, mixed with blood and some pus, was discharged.

Nov. 27th. The wound discharged healthy pus unmixed with fæculent matter; he was free from fever.

Dec. 8th. He attempted to stand, but the left leg yielded beneath his weight.

Jan. 2nd. His health and strength was considerably improved; for some time the left extremity was nearly paralytic, though frequently attacked with paroxysms of pain and numbness.

Peculiar Injury of the Ankle-Joint. By Dr. Power. The patient, aged 28, a sweep, was admitted under his care into Jervis-street Hospital, on the 12th of November, 1850, suffering from a recent injury to his left lower limb. The foot was rotated considerably inwards; the outer edge of the foot was directed outwards and downwards, so that when the patient attempted to stand, this part of the foot pressed against the ground. The inner edge of the foot looked upwards and inwards. The dorsum looked upwards and outwards; and the sole of the foot looked obliquely towards the foot of the opposite side. The *external malleolus* was more prominent than natural; and instead of the ordinary well-marked sulcus underneath it, there existed a firm ridge of bone, which accompanied the motions of the foot, and disappeared when the latter was restored to its natural condition. The measurement from the lowest point of the external malleolus to the outer edge of the foot, was half an inch greater than in the natural position. The internal malleolus appeared buried in an angle formed between the foot and leg; still it could be distinctly felt. The inner edge of the foot appeared drawn up towards this malleolus, and these were nearer to each other by half an inch than the ordinary position of the limb. In a word, the foot presented very much the appearance of ordinary "*talipes varus*". The toes were rather more elevated than usual. The circumference of the limb, corresponding to the two malleoli, was found to be fully one inch more than the opposite side, or than the same limb when the patient left the hospital. A good deal of serous effusion was present both in the foot and leg. The finger could be made to sink into a longitudinal groove between the tibia and fibula. The latter bone could be traced in its entire length, without any solution of continuity; no crepitus whatever could be detected. By flexing the leg upon the thigh, and then with one hand laying hold of the heel, whilst with the other he grasped the anterior part of the foot, and by drawing the foot downwards from the leg, rotating it outwards at the same time, Dr. Power restored the foot to its natural position with the greatest ease; and this movement was attended with very little pain to the patient. When the foot was so

replaced, it was clearly ascertained that there existed no fracture of the tibia in any portion of its length.

The patient related the following history of the manner in which the accident was produced. He stated that he had been in company with some persons of his own calling, that they were intoxicated, and had quarrelled. One of them laid hold upon the patient's leg, placed the inside of it in front of his own knee, and then with both hands tried to break it, as he would "a stick or a turf".

This was an accident the reverse of that described by Mr. Pott, unaccompanied by any fracture whatsoever. Dr. Field considered the case an example of *diastasis*, or separation between the tibia and fibula at their inferior articulation. The forcible rotation of the foot inwards (whilst at the same moment the inner malleolus was forcibly pressed against by the knee of the person inflicting the injury) would be most likely to be accompanied by such a displacement outwards of the astragalus as that, in following the motions of the foot, the external surface of this bone would be made to press against the corresponding articulating surface of the fibula with considerable force. The violence being still continued, the fibula must either give way, or the external lateral ligament be torn ; but, as has been already stated, the fibula remained entire ; the great probability was, therefore, that the external lateral ligament was ruptured, and not only so, but from the fact of the fibula being separated from the tibia, either the strong interosseous structure connecting these bones inferiorly must have been ruptured also, or a small portion of either of them must have been broken off. But of the existence of any such fracture there was no evidence. Hence the interosseous structures inferiorly must have been torn, and in this manner the fibula became disconnected from the tibia. The mortice for the reception of the astragalus thus became widened, and this latter bone could be moved with comparative freedom in its socket. It was more than probable that this same violent turning of the foot inwards forcibly stretched the peroneus brevis and longus ; and these muscles being thus prevented from exerting their contractile powers, the foot was left to the uncontrolled action of the muscles at the inside of the leg, thus giving the peculiar direction to the sole of the foot. By proper manipulation, the foot was easily reduced to its natural position, but when left to itself it was drawn back again to the abnormal condition.

The apparatus applied was that recommended by Dupuytren for fracture of the lower extremity of the fibula, instead with the splint applied to the outside of the leg. The thick extremity of the pad was made to rest against the lower part of the external malleolus. The upper portion of the splint and pad having been secured to the leg by the circular bandage, the luxation was reduced ; and the foot having been rotated outwards, so that the external edge was firmly drawn towards the splint, it was made fast in this situation.

The patient continued in hospital till the 13th of December, being a period of one month. At this date he left the hospital, but was not able to move about without suffering and insecurity. He was readmitted therefore upon the 19th of December, and again subjected to the same mode of treatment. On the 7th of January following, he was discharged cured, and continued to enjoy the free and perfect use of the limb.

Case of Polypus Uteri. By R. Johns, M.D. This was a specimen of the channelled polypus, described by Dr. Oldham, at an early stage of development. Dr. Johns differed from Dr. Oldham, who described the channels as being placed on the internal surface of the polypus. He believed that these cavities belonged more to the external than the internal surface of the polypus. The patient was a lady, aged 39. Dr. Johns removed the polypus by ligature and excision ; and the patient had continued well.

New Instrument for Cupping the Uterus. By T. R. Mitchell, M.D Two instruments were employed : the one, an exhausting syringe with a cup

at its extremity to hold the blood (this instrument is about fourteen inches long, and is furnished with a tube to admit the air into the cup at will, and by that means to overcome the exhaustion, a matter of much moment, as in the application of the instrument it is occasionally necessary to remove it before the exhaustion has ceased) ; the other instrument is a scarificator, of the same length, having three lancets set on a revolving pin, capable of being set and discharged at the distal end of the instrument. Both instruments are straight, and are something less than the circumference of a shilling in diameter, to permit their passage through a speculum. The patient having been brought before a good light, and placed upon her left side, the speculum is introduced, and the neck of the uterus brought into view, all adhering mucus being previously removed, the exhausting syringe is applied and the part made tumid by exhaustion ; the scarificator is then used, and if a large quantity of blood is required, the incisions may be crossed. This is effected without any pain to the patient ; the exhausting syringe can then be used as often as necessary, and as much blood taken away as the operator may wish ; no dressing of any kind is required.

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

The Nineteenth Anniversary Meeting was held at Brighton, on Wednesday the 13th, and Thursday the 14th of August, 1851. The following gentlemen were present. We regret we have not had materials for the compilation of a complete list. Above three hundred members were present.

Alford—R. U. West, Esq.
Arundel—Silas Stedman, M.D.
Aylesbury—Robert Ceely, Esq.
Basingstoke—Thomas Workman, Esq.
Bath. J. S. Bartrum, Esq.; W. Church, Esq.; W. Davies, M.D.; Edw. Hodges, M.D.; G. Norman, Esq.; John Soden, Esq.; Thomas Stokes, Esq.; James Tunstall, M.D.
Bexhill—F. Wallis, Esq.
Birmingham—G. B. Knowles, Esq.; J. Wickenden, Esq.
Brentford—G. Cooper, Esq.
Brighton—J. C. Burrows, Esq.; Charles Carpenter, Esq.; C. W. Crowdy, M.D.; H. Davies, M.D.; Richard Dill, M.D.; G. Drummond, Esq.; J. C. Franz, M.D.; T. B. Horne, Esq.; G. S. Jenks, M.D; R. H. Kemp, Esq.; W. King, M.D.; George King, Esq.; John Lawrence, Esq.; G. Lowdell, Esq.; J. M'Whinnie, M.D.; James Oldham, Esq.; E. L. Ormerod, M.D.; G. E. Pocock, Esq.; George Royde, Esq.; R. Rugg, Esq.; S. K. J. Scott, Esq.; B. T. Seabrook, Esq.; T. H. Starr, M.D.; B. Vallance, Esq.; Wm. Wilton, Esq.; T. B. Winter, Esq.
Bristol—C. J. Fox, M.D.
Brockton—Joseph Hickman, Esq.
Callington—John Kempthorne, Esq.
Cambridge—G. M. Humphry, Esq.
Canterbury—James Reid, Esq.
Cheltenham—A. H. Hull, Esq.; J. D. Hull, Esq.; Thomas Smith, M.D.
Chichester—Allen Duke, M.D.; J. M'Carogher, M.D.; N. Tyacke, M.D.
Chester—J. Edwards, M.D.
Chiswick—Harrington Tuke, Esq.
Clifton—John Colthurst, Esq.
Cowfold—Thomas Gravely, Esq.
Crawley—Thomas Smith, Esq.
Croydon—G. Bottomley, Esq.; W. Chalmers, M.D.; C. Lashman, Esq.; E. Westall, Esq.
Cuckfield—T. S. Byass, Esq.
Dover—George Soulby, M.D.
Farnham—W. Newnham, Esq.
Great Grimsby—Thomas Bell, Esq.
Guildford—A. Napper, Esq.; James Stedman, Esq.
Hailsham—J. M. Cunningham, M.D.
Hanwell—John Conolly, M.D.
Hartfield—William Wallis, M.D.
Hastings—W. A. Greenhill, M.D.
Hayes, Middlesex—W. Conolly, M.D.
Hereford—J. B. Lye, M.D.
High Wycombe—William Rose, Esq.
Hillingdon—A. Stilwell, Esq.
Hull—F. R. Horner, M.D.; J. A. Locking, Esq.; Edward Wallis, Esq.
Hurtspierpoint—H. M. Holman, M.D.; R. Weeks, Esq.
Leeds—R. G. Mayne, M.D.
Leicester—Thomas Paget, Esq.
Lewes—Henry Moon, M.D.
Lindfield—J. H. Bull, Esq.
London—William Baly, M.D.; J. M. Beane, Esq. (Peckham); Jno. Bowling, Esq. (Hammersmith); T. L. Blundell, M.D.; I. B. Brown, Esq.; George Burrows, M.D.; John Rose Cormack, M.D. (Putney); Edwards Crisp, M.D.; Mark Dewsnap, Esq. (Hammersmith);

S. Hare, Esq.; William Harvey, Esq.; Thomas Hodgkin, M.D.; Joseph Hodgson, Esq.; C. F. J. Lord, Esq. (Hampstead); Henry Oldham, M.D.; John Propert, Esq.; A. Shaw, Esq.; Francis Sibson, M.D.; T. H. Silvester, M.D. (Clapham); John Snow, M.D.; T. Taplin, Esq.; Theophilus Thompson, M.D.; Joseph Toynbee, Esq.; W. H. Walker, Esq.; Charles West, M.D.; Charles J. B. Williams, M.D.; Forbes Winslow, M.D.; James Yearsley, Esq.

Long Sutton—Henry Ewen, Esq.
Maidstone—William Addison, M.D.
Manchester—John Bridecook, Esq.; S. Crompton, Esq.; John Hatton, Esq.; Edmund Lyon, M.D.; T. Radford, M.D.
Melton—John Kirkman, M.D.
Needham Market—J. Bedingfield, M.D.
Newhaven—John Noakes, Esq.
Northampton—Arch. Robinson, M.D.
Norwich—W. H. Ranking, M.D.
Norwood—W. Street, Esq.
Oswestry—Peploe Cartwright, Esq.
Pocklington—Thomas Hornby, Esq.
Reading—Charles Cowan, M.D.
Reigate—P. Martin, Esq.; John Steele, Esq.
Rochford—John Grabham, Esq.
Romsey—J. R. Beddome, Esq.
St. Asaph—O. Roberts, M.D.
St. Leonard-on-Sea—P. Blakiston, M.D.
Sevenoaks—George Kelson, Esq.; J. L. Worship, Esq.
Southam—H. L. Smith, Esq.
Southampton—O. W. Williams, M.D.
Southwold—Robert Wake, M.D.
Spalding—E. Morris, M.D.
Steyning—R. A. Frew, Esq.
Stockport—G. Downs, Esq.; J. Rayner, Esq.; George Turner, M.D.
Stowmarket—C. R. Bree, Esq.
Stratford-on-Avon—T. Thompson, M.D.
Sunbury—J. S. Soden, Esq.
Taunton—F. H. Woodforde, M.D.
Thrapston—J. G. Leete, Esq.
Timsbury—J. Crang, Esq.
Torquay—J. J. Field, M.D.; C. Radclyffe Hall, M.D.; C. B. Nankivell, M.D.
Totnes—John Derry, Esq.
Tring—Edward Pope, Esq.
Tunbridge Wells—W. H. Cook, Esq.; R. R. Gream, Esq.; G. Moore, M.D.; G. Moore, Jun., Esq.
Uxbridge—James Stilwell, Esq.
Warminster—G. Vicary, Esq.
Week St. Mary—J. K. Tuke, Esq.
West Coker—Charles Penny, Esq.
Westerham—C. M. Thompson, Esq.
Winchelsea—R. C. N. Davies, Esq.
Wingham—F. H. Sankey, Esq.
Worcester—H. D. Carden, Esq.; Sir Charles Hastings, M.D.; Jonas Malden, M.D.; George A. Sheppard, Esq.; J. P Sheppard, Esq.
Worlingworth—E. B. Rector, Esq.
Worthing—Henry Collet, Esq.
York—Thomas Simpson, M.D.; Caleb Williams, Esq.

First General Meeting.

Wednesday, August 13th, 1851.

Sir Charles Hastings moved that Dr. Horner, of Hull, take the chair.

Dr. Horner: I resume the chair but for the purpose of inducting thereto my successor, Dr. Jenks, and I congratulate the Association that their choice has fallen upon one whose experience and ability so well befit him for the office. I think, gentlemen, that we have much cause for satisfaction at our present position; let us not, however, I beseech you, therefore be content—be satisfied—with where we now are, for we know that these are days of progress, of onward movement, of discovery. To put forth only exertions which we have been in the habit of putting forth, would really be to retrograde in the great intellectual march. There is greater cause than ever for exertion; and as the eagle is fabled to fix its piercing gaze on the sun, and thitherward unswervingly to cleave his course, so let the light of knowledge, the good of mankind, and the advancement of science, be as it were the shining beacons of our course. With an eye that is single, and a purpose that is determined, be our course like the eagle's—onward—right on. There is one subject to which I will only cursorily allude; it is one, however, on which I have strong personal feeling, and which I cannot in my office of retiring President, refrain from just alluding to—I mean the sad bereavement which we have sustained in the death of Dr. Mackness. He was my sincere and my valued friend. But a week before his death, he wrote me expressing his congratulations at the thought of reading an address before you in this room, on this day. Here is the audience; but where is the lecturer? *Sub cespite jacet.* I say this does give us a reason for now doing our

duty in that state of life to which we have been called. If we are willing to exert ourselves for the benefit of our fellow-men, and for the great objects of the Association, now is the time that we should do it. Such a painful event also naturally awakens in the mind other feelings, of a far more important nature. The words of Young occur to my mind as most applicable:

> "Whose grave prescribes the best? A friend's.
> And yet, from a friend's grave how soon we disengage!
> E'en to the dearest, as his marble cold.
> Why are friends ravished from us? 'Tis
> To bind, by soft affection's ties, the human heart
> To thoughts of death, which reason, too supine,
> Or misemployed, ne'er fastens there.
> And yet nor reason, nor affection, nor both combined,
> Can break us from the witchcrafts of this world!
> The inexorable hour,—how near at hand!
> The inexorable hour,—how soon forgot!
> Nay, to forget it, the chief aim of life,
> Tho' well to ponder it is life's dire end."

We have now specific duties before us; and whether I look at the magnificent arrangements which have been made for you, or whether I look to the high character of our medical friends at Brighton, or whether I look at our Association, now in all the vigour of its nineteenth year, I am sure I can safely foretell a most happy, and a most prosperous meeting.

Dr. Jenks, amid hearty applause, then took the President's chair, and said: Gentlemen,—When I look round upon this assembly, composed of members of a learned and scientific profession, many of whom by the force of intellectual zeal and power have risen to distinction in the highest walks of literature and science, as well as in the various branches of medicine and surgery, and consider that I have been nominated to preside over so distinguished a body, I feel deeply sensible, I assure you, of the great honour conferred on me; but unaccustomed as I am to fill so high an office, I hardly know in what terms I can make my acknowledgements acceptable. I must entreat you, therefore, to receive my best thanks as kindly and favourably, as I tender them cordially and gratefully.

In entering upon my office, gentlemen, believe me, I have no little mistrust of my ability, through inexperience, to fulfil the duties thereof in a manner adequate to my own ideas, much less equal to the expectations of such an audience. I must, therefore, crave a larger share than usual of that indulgence and support which you always readily accord to your Presidents. I know well, on looking at the names and qualifications of those gentlemen who have already filled this chair, that there is no lack of admirable and excellent examples to all who may come after; but this very excellence it is, which augments the difficulties of their successors. In all posts of honour men are excited to do their best. There is a not unbecoming pride in doing more than was expected of us, and not less than others would have done; but with such an array of distinguished predecessors before me, in all humility and sincerity, I regard the latter hope as unattainable. I must be content to follow, *haud passibus æquis*, those eminent persons who, with so much dignity and ability, have conducted the deliberations of these meetings on former occasions, and shall think myself well rewarded if I succeed in imitating their example to your satisfaction; if not, I feel persuaded you are generous enough to accept the intention favourably, and to think there may be even some merit in the earnestness of my endeavours.

We are now met to celebrate the nineteenth anniversary of the Provincial Medical and Surgical Association, and the numbers assembled here this day abundantly testify to the continued prosperity and importance of the Society. Great have been the benefits conferred on its members, in the diffusion of knowledge, in the union of thoughts and interests, in the interchange of

kindly offices—and, I think I may add, that faithfully and extensively has the General Association been seconded in this good work by the local branches.

It was happily and wisely determined, by the honoured founder of this Institution, to collect his widely scattered associates, year by year, into one place, where minds overwrought by the cares, anxieties, and Sisyphean labours of a busy harassing profession, might forget awhile their ever-recurring toil, and indulge freely in well-intentioned and dignified sentiments and communion, by which manners are improved, character is exalted, mutual esteem generated, and good fellowship established and strengthened. Besides the cultivation of the social virtues, we gather other fruits from these meetings. We learn the advantage of combination and concert for the advancement of professional objects, and for public ends. The difficult and much vexed questions of medical reform, the unrestricted sale of poisons, the state of health of the people, together with the legislative measures needful for their improvement, have occupied your time, and been maturely and deliberately considered.

Deputations from the Provincial Medical and Surgical Association have been received by those in authority with marked respect, and listened to with becoming attention. The resolutions formed at your meetings have taken effect, your reports been approved, and your suggestions upon legislative improvements adopted. In proof of these remarks, we may refer with satisfaction to the spirit of conciliation manifested by the Council of the College of Surgeons in their recent concessions; to the Sale of Arsenic Regulation Bill, and to the impulse given to sanitary improvements all over the country.

Furthermore, as an important auxiliary to your proceedings, you have a well-established, most ably conducted, and excellent *Journal*, which registers your deeds, publishes original essays, treasures up valuable facts, and is at once a channel for mutual correspondence, impartial criticism, and useful intelligence. The volume of "Transactions", published yearly, I may say, without fear of contradiction, deserves a place in every medical library in the kingdom.

But neither are social advantages, nor science, nor medical polity, exclusively the objects sought for and obtained on these occasions. From the bosom of these meetings there emanated that excellent and charitable idea of a "Benevolent Fund", for the relief of distressed and decayed members of the profession, and the widows and orphans of those deceased. In this beneficent cause, I might be pardoned for addressing you at the length it deserves—but I forbear. At the proper time, this subject will come before you, adorned with the moving eloquence and urged with the fervent zeal which have distinguished its able advocate, the Treasurer and Secretary, upon all former occasions. To him belongs the task, *magnum munus atque onus*, of appealing to you in behalf of our poorer brethren, and well persuaded am I that he will not do so in vain. Suffer me merely to remind you, that poverty is an evil bringing in its train so much trouble, peril, and misery, that while every man should strive to avoid it, he ought at the same time to help, as far as he is able, those whom the gripe of necessity has reduced to destitution. Indeed this can hardly be considered a duty that we can do or leave undone as we list, for many are they who stand in utmost need of our bounty. And shall the reproach be cast upon us that we do not readily assist one another? Upon us! the members of a profession, of whom it was said by Dr. Johnson, that "every man has found among them great liberality and dignity of sentiment, very prompt effusion of beneficence, and willingness to exert a lucrative art, where there is no hope of lucre".

If we look heedfully at the condition of many of our poorer brethren, especially in the rural districts—over-worked, badly remunerated, cruelly oppressed by hard task-masters, or perchance ruined by the reckless competition of interlopers, we shall see abundant necessity for a Benevolent Fund.

Much of this evil is to be attributed to the adverse administration of the Poor Laws. It would have given me great pleasure if I could have announced any improvement in the relative position of medical union officers and their oppressors—the guardians of the poor, as they are called; but I am sorry to say that the Committee of the Convention of Poor-Law Medical Officers have suspended their meetings through want of support. After a statement of their difficulties and proceedings, they conclude their report by urging "the Poor-Law Medical Officers and the profession in general to consider how much the redress which is sought, and for which so large a sacrifice of money, exertion, and time, has been made by some of their brethren, is within their voluntary grasp; but that it can never be hoped for so long as the degrading and ill-paid appointments are not merely accepted, but made the objects of eager competition."

Alas! how long will this spirit of rashness on the one hand, and supineness on the other, disturb our counsels, and cast reproach upon our very name and calling. Let it be remembered that, by this ruinous competition for Poor-Law appointments, the real thrift and progress of the profession are seriously injured; that, by undertaking more than they can perform, medical officers share the guilt of neglecting the poor with the so-called guardians; that, by receiving less than a just reward for their services, they degrade themselves, and damage not only the interests of their fellow-labourers with their own, but indirectly those of every practitioner in the kingdom. A competition, unlimited like this, degenerates into unlicensed selfishness, which can only be checked by judicious combination. These rival principles may both be considered useful when properly balanced. Some degree of honest rivalry or emulation is needful to develope the energies of mankind; and some degree of combination equally so to protect the interests of class or profession. The one is a duty we owe to ourselves, the other to our neighbours. The remedy for this debasing system of Poor-Law competition is chiefly in the hands of the Union Officers themselves; but much might be done by a Government acting upon public principles for the public good, and especially the good of the indigent poor, who in the main are the greatest sufferers by these irregularities.

From this discouraging state of things, however, let us turn to the subject of Medical Reform, which at length affords a better prospect. In the opinion of most thinking and well-informed men, the question of medical reform is now ripe, and probably none the worse for having been hitherto withheld. It has been cast into the crucible of public discussion, and has come out purified, and separated from much dross. The contending parties are now wiser, and better disposed to treat upon equitable terms. Upon this ground, therefore, we may look with more sanguine hopes than heretofore; with hopes, I would fain believe, well and solidly founded, that all parties, seeing the propriety of needful concessions, will concur in a plan of practicable and useful reform, which shall have for its basis the principles contended for by this Association, and on various occasions so ably advocated by the President of the Council and his colleagues. The consummation of these hopes, I am afraid, is not very near at hand; nevertheless, the good already effected is great; the progress, though slow, is assured. The moral certainty of some efficient reform should console us for its delay, for there is no fear of retrogression.

In the mean time, gentlemen, it behoves us all, and especially the junior members of our noble calling, to persevere steadily and diligently in cultivating the art and science of medicine; neither deterred by the difficulty of the study, which cannot be achieved without much labour, and no trifling proficiency in the other sciences; nor discouraged by a degree of uncertainty pertaining to it, in common with many other branches of human knowledge. "Whatever can be said of the uncertainty of the art of physic," writes Sir William Temple, "or the disagreement of its professors, they may, I believe,

confidently undertake, that when divines arrive at certainty in their schemes of divinity, or lawyers in those of law, or politicians in those of civil government, the physicians will do it likewise in the methods and practice of physic."

An earnest and truthful endeavour to improve our professional knowledge is the best foundation for public support, and the surest weapon wherewith to defeat the bold pretenders who rise up daily around us. Men of this description, whose maxim is, *ibi fas, ubi maxima merces*, have only themselves to serve:—we, our country and mankind. In such a cause our efforts are ennobled, and we should rather rejoice in being called to such a service.

Let not any man wonder that quacks and impostors should abound even in these enlightened days. They have abounded in all times and in all professions, and probably will never cease; for there is nothing so irrational or extraordinary that some men will not maintain for truth, feeling sure that the credulous and ignorant vulgar, rich and poor, will receive it with implicit belief. We live in an age, for example, supplying humble followers in great numbers to Mormonism, and educated *gobemouches* in crowds to Mesmerism.

It is not my intention to treat of the fashionable follies of the day—the mystifications and legerdemain of Mesmerism, the unreal mockeries and sublimated jargon of homœopathy, nor the more dangerous excesses of hydropathy. All this has been admirably done lately by an accomplished member of this Society. I would observe merely that such aberrations from the path of true medical science should be abjured and repudiated with firm and solemn resolution, while the professors thereof may be left to an avenging Nemesis, which may one day or other overtake them. Let me, however, turn your attention to an evil which has developed itself within our own ranks.

"Iliacos intra muros peccatur et extra."

We have treachery within, and war without. Open adversaries we know well how to deal with; but it is another thing when a man's foes are of his own household. I am grieved to hear that some, even of the legitimate sons of physic, are tainted with the leaven of these new doctrines, that others, like the bat in the fable, take either side as it may suit their purpose, while a few have not scrupled from indifference or crooked policy to countenance this defection, or to shield it by a sort of compurgation. Against this laxity of conduct the opinion of the profession should be unmistakably pronounced. To admit seceders, or doubtful allies, to the privileges of regular practitioners, or to an equality in consultation, is the same sort of treason to the profession as the admission of the wooden horse within the walls of Troy. I trust enough has been said of late to induce those who have extended an ill-timed indulgence to these false brethren to withdraw from further communication with them; for we must never look for peace with quackery in any of its monstrous shapes. As to the apostates themselves, it would be well that by a self-ostracism they quitted altogether the ranks of a profession which by a half-faced fellowship they dishonour and betray, lest, neglecting such admonition, they find at length "forbearance no acquittance". Their secession will relieve us from much embarrassment, and their hostility will have no other effect than to strengthen our mutual confidence, improve our discipline, and excite us to increased exertion.

It has been usual, I believe, on these occasions, to pass in review the characters and services of those members of the Association who have departed this life during the past year. Time will not permit me to dwell upon the worth and merits of each individual; and were it otherwise, I could not perform that melancholy but grateful office, from lack of needful information. But there is one whom I cannot pass over without paying to him the tribute due to a most able and zealous member of this Association; one who, had he been spared, would have been a principal contributor to the proceedings of this day.

I do not take upon myself the office of biographer, but a short summary of the principal events in the life of our late lamented associate, Dr. Mackness,

may not be unacceptable. In early life he met with some trials, and was beset with difficulties, which to many might have seemed insurmountable. By dint of patient industry, frugality, and an excellent understanding, wholly unassisted by favour or fortune, he cleared the way at length to eminence, and made good his position. His was no exception, however, to the rule of the poet—

> "Haud facile emergunt, quorum virtutibus obstat
> Res angusta domi."

It would be foreign to my purpose to follow our late colleague through the difficulties he encountered, and so manfully overcame. I intend only to shew you that he sounded all the depths, and passed through all the tides of medical life. He began his professional career as a general practitioner in a country village, whence he removed to a larger field of practice at Northampton, but being unequal, through ill health, to the numerous and very arduous duties of general practice, he retired. In May 1840, he went to St. Andrew's, where he took the degree of Doctor of Medicine. In the year 1843, he became an extra-licentiate of the Royal College of Physicians, London. Soon after he had obtained his degree at St. Andrew's, he settled at Hastings, where he continued to practise as a physician till his death.

In private life he was beloved, and deservedly respected; he was a cheerful and instructive companion; his sentiments were solemnly religious, but elevated and liberal; his manners gentle and unassuming; his professional acquirements were of the highest order. To great skill and readiness in detecting and treating disease, he added good sense, urbanity, and benevolence. Though fully occupied in practice, he found time for several publications; he added to the stock of medical literature (besides minor performances), a work on *The Moral Aspects of Medical Life*, containing a translation of the *Akesios* of Professor Manx. In this work of our late associate some inexperience in the art of composition is apparent; but it is rich in medical ethics, containing a judicious selection of facts, and abounding in interesting anecdotes. He wrote also a monograph on *Dysphonia Clericorum*, a work displaying distinct and accurate views of a disease not heretofore separately treated of, and manifesting great ability and judgment in the application of those views to practice. He was occupied in preparing a *Report upon the Medical Topography of Sussex*, when the hand of death removed him from among us. Dr. Mackness died at the early age of 46. It may be said of him, as it has been said of another eminent physician, that "he worked out for himself an education, a profession, a reputation, and a competence".

The SECRETARY read the REPORT OF THE COUNCIL, from which we copy some extracts.

"FINANCES. The statement is as follows:—

	£.	s.	d.
Balance in hand, 1850	109	18	6
Receipts	1616	19	7
Expenditure	1632	14	11½
Balance	94	3	1½

"MEDICAL REFORM. This difficult question still remains unsettled, but the Council fervently hope that it is approaching a termination that may ultimately prove satisfactory to all parties. The present year has been distinguished by the Council of the College of Surgeons taking the lead in the adoption of a highly conciliatory course of conduct, for which they deserve, and have received, a meed of praise from all parties in the profession. This concession has very considerably lessened the obstacles which stood in the way of medical reform. There are, however, still some difficulties to be overcome, which require calm and careful consideration; but as all parties are now animated by an earnest desire that this long contention should cease,

your Council cannot but look forward to the final settlement of the question at no distant day."

"As soon as it was known that the Council of the College of Surgeons were prepared to yield so much, your Council communicated with many members of the Association, and with the accredited societies, who had worked with them to obtain a legislative amelioration of the profession. The result of this consultation was, that it was deemed prudent by all parties to accept the proffered terms of the College, with some slight modifications. Your Council, therefore, thought it right to address the Secretary of State for the Home Department, and at the same time assured him that they felt gratified by the concessions which had been made by the College; they also reiterated the principles on which they considered any safe medical legislation should proceed."

"Since the memorial no further step has been taken, as the near approach of the anniversary rendered any further movement unnecessary. The Council, however, have thought it desirable to seek the opinion of the District Branches on the course they have pursued, and they are happy to say it has received their sanction."

"Medical Ethics. The subject of medical ethics is very important, and from the commencement of our Institution has attracted more or less attention. A committee was appointed at Worcester to report on this subject, but has not hitherto done so, partly because of the death of one of the members, and the ill health of another, and partly in consequence of the great difficulty of carrying on any deliberation where differences of opinion exist, by any means except *vivâ voce* communications. Some progress, however, has been made in the work, and a portion of the rules are in type. At the present juncture it is highly desirable that we should give a calm and judicious attention to medical ethics; for it is much to be regretted that many regularly educated members of our profession have connected themselves in doctrine and practice with some of the popular delusions of the day. It will be by the judicious consideration of such important matters that the advantages resulting from this Association will become more and more apparent. The inflexible adherence to correct principles and upright conduct, will thus continue to be the rallying point of the members of the Association, and they will evince their determination to maintain amongst them a sound philosophy and unblemished honour. Charles Hastings, President of the Council. James P. Sheppard, Secretary."

On the motion of Dr. Cormack, seconded by Dr. Forbes Winslow, the report was adopted.

Committee on Irregular Practice. Dr. Cormack moved—"That the prevalence of irregular and unprofessional practices ought to be considered at this annual assembly of the Provincial, Medical, and Surgical Association; and that a Committee be appointed to report to-morrow upon the course which it is proper to adopt. Dr. Tunstall seconded the motion, which was agreed to; and Drs. Cormack, Tunstall, and Ranking, were appointed a committee in terms of the motion.

The Address in Surgery was delivered by Mr. B. Vallance, of Brighton, and ordered to be printed.

Second General Meeting.

The Association reassembled, after an hour's interval, at two p.m.

Income-Tax Committee. Dr. T. Smith (Cheltenham) said that for a long time the members of the profession had suffered, most iniquitously in his opinion, from that ill-advised measure the income-tax (hear). To the medical man more especially the income-tax had been oppressive, and often-

times had very seriously affected his future interests. It had been in its operations most unjust, if not something more; and, as an instance, he would state a fact:—A medical man was taken ill shortly after making a return, which was made at a moment when he was in perfect health. He (Dr. Smith) was not now going into a newspaper narrative, but was stating a particular case. The person was taken ill shortly after making a *bonâ fide* return of his previous year's receipts,—perhaps he had compounded for three years; he was suddenly laid on a bed of sickness, and for some time deprived of the means of making up his income, and yet he had no appeal, and could not prevent the tax collector's receiving that full amount of income derived by government from the income-tax. The money was not in that case derived from the labours of the medical man; and such an unjust tax ought to be done away with. The matter had been before government, and the farmer had been allowed to make a claim, and a deduction had been granted to him; but the professional man, stretched upon a bed of sickness, had no appeal. (*Applause.*) It was a matter which ought to be pressed upon the Chancellor of the Exchequer. For his own part, he was most strenuously and decidedly opposed to the income-tax in any way whatever. It was a most iniquitous and unjust tax; and of all the taxes relative to the medical profession, the income-tax was the most unjust. And with regard to the mode of assessment, it was subject to much abuse. All the clerks were sworn to secrecy; but who would be answerable that a young man of eighteen or nineteen, would, upon leaving his employer, still value and adhere to the oath which he had first taken? He did not say that those young men did break their oaths, but still there was a probability that they might. And as regarded the secrecy of the income-tax, it was almost a complete farce. He (Dr. Smith) had compounded under the impression that his income would be kept perfectly secret. He went before the authorities, and, instead of taking his word, they put his name down at £20 instead of about £7 a year, and he allowed it to remain. He went to pay the money, and in that room where everything ought to have been profoundly secret, he saw some twenty persons, and there was a list there containing the names of all the parties who had compounded under what was called the Special Commissioners' Act, and he could have read the whole of that list if he had thought proper to do so. That was considered secrecy! So far as professional men were concerned, it was a matter of great importance that the amount of income derived from their business should not be known. He was not satisfied also with the workings of a measure which compelled the medical men of Great Britain to pay a tax from which their brethren in Ireland were exempt. If the medical profession were free in one part of Her Majesty's dominions, it ought to be free in another. (*Applause.*) And also, as regarded the assessment-tax, their brethren on the other side of the water were exempt, whilst they had to pay, and on these grounds a favourable opportunity existed for the medical profession to bestir itself, and endeavour to influence the legislature to make a reduction of those taxes which so seriously affected every member of the profession. And with regard to the assessed taxes, there was a movement on foot at the present time, to make the tax upon coach horses more equalized. He knew several parties who were independent, and could ride in their carriage without having to pay that tax, whilst they (the profession) worked hard and laboriously to earn their bread, and yet were compelled to pay that tax. The farmer could now have his horses exempt, but medical men had not the slightest exemption, and government always imposed taxes upon the profession whatever the effect of the imposition might be. And again, with regard to the house duty, they had to pay 9d. in the pound as professional gentlemen, whilst the merchant, rolling in wealth, had only to pay 6d. He hoped that the meeting would carry his motion and appoint a committee to inquire into the laws affecting taxation, and more especially with reference to the income-tax. He moved,—"That a Committee be

formed for the purpose of investigating the subject of taxation, so injuriously and oppressively affecting the medical profession."

Mr. Newnham, of Farnham, seconded the motion.

The motion was carried unanimously; and an influential committee was formed in accordance with it.

Benevolent Fund. Mr. Newnham read a very interesting Report of the Benevolent Fund. The cash account is as follows:—

DONATION FUND.

Dr.	£	*s.*	*d.*	*Cr.*	£.	*s.*	*d.*
Amount invested to July 1850	2179	10	6	Amount previously invested	2179	10	6
Interest for the year	62	10	0	Balance due to Treasurer, July 1, 1850	11	9	6
Donations for the year	188	15	0	Annuities, November 1850	37	10	0
				Do. May 1851	37	10	0
	2450	15	6	Purchase of Bank Stock July 1851	214	14	6
Per contra	2450	15	6				
Balance due to Treasurer	29	19	0		2480	14	6

Value of Bank Stock invested, £1200 at 214.....£2568

SUBSCRIPTION FUND.

Dr.	£	*s.*	*d.*	*Cr.*	£	*s.*	*d.*
Balance, July 1, 1850	33	1	1	Benevolent aid to June 30	464	2	6
Subscriptions to June 30, 1851	540	1	4	Nichols, for stationery and printing	20	16	6
				Envelopes and stamps	26	15	10
	673	2	5	Advertisements and expenses of Local Secretaries	5	0	2
Per contra	516	15	0				
Balance in Treasurer's hands	56	7	5		516	15	0

DISTRIBUTION OF BALANCE.

Donation Fund due to Treasurer	£29	19	0
Subscription Fund in Treasurer's hands	56	7	5

Dr. W. Conolly moved the adoption of the report.

Dr. T. Thompson (Stratford) had great pleasure in seconding that motion. In the whole range of the Association not another gentleman would be found willing to devote so large a portion of his time to the promoting the objects of the Benevolent Fund, as their respected friend, Mr. Newnham. *(Cheers.)*

Empiricism. Dr. Malden (Worcester) read a very talented essay on this subject, which was ordered to be printed.

Prognosis of Insanity. Dr. Conolly, of Hanwell, read a highly valuable practical paper on this subject, which will likewise appear in the Transactions of the Association.

At six o'clock the members assembled in the Banquet Hall of the Pavilion, in compliance with the invitation of Dr. Jenks and the other medical gentlemen of Brighton, to partake of a splendid cold collation.

Dr. Mantell's Address. After dinner Dr. Mantell delivered a lecture, in the Music Room, upon "The Medical Topography of Sussex".

Third General Meeting.

Thursday, August 14th, 1851.

The President took the chair at twelve o'clock; and immediately called for the Report of the Committee on Irregular Practice.

Dr. Cormack said: I have the honour, sir, to be commissioned to offer for the acceptance of this great meeting the Report of the Committee, which was yesterday appointed, to consider the course which the Association ought to adopt with reference to the prevalence of irregular practice, and unprofessional conduct. The great amount of important business to be disposed of

before we separate, suggests the impropriety of a long speech: and yet it does seem essential for me briefly to state the general principles upon which the Committee have proceeded, and in particular to mention the grounds upon which they have founded certain Resolutions, which they hope the Association may adopt as its own.

Although the terms of our appointment might have justified a more general notice of the prevailing delusions and impostures of the day, we have thought it best to direct your attention solely to what is called homœopathy, as along with it are almost invariably associated some of the other fashionable systems of charlatanry. I am anxious to state, at the outset, that we have not thought it necessary to adopt the language of controversy; and that we have conceived the main duty of this body to be *defensive*, and not *offensive*. If there were no fear of quackery, in one of its most seductive and demoralising forms, creeping into our society, to spoil our social meetings, and canker the integrity of our professional intercourse with each other and with the public, it might be wrong to enter on this discussion; but when we see members of the medical profession fighting the battles of a mischievous charlatanry, under the banners of legitimate medicine, it is time for us to be stirring, lest these apostates, when actually sheltered by this Association, damage its respectability, and perhaps ultimately endanger its very existence. Unlike the Colleges, we have no Royal charters upon which to rest in supine and dignified tranquillity: our only charter is the association of numbers in defence of truth and high-toned professional honour. This charter—the best of all charters—it is our duty and our privilege to defend. We are not required, however, to make an aggression upon the allied armies of quackery; but the aspect of society, and of the profession, do loudly call on us to raise bulwarks and defences sufficient to prevent this enemy from stealing a march upon us, and destroying our citadel ere even the cry of danger has been heard. Such, then, are the general principles which ought to guide us; and which, when applied to the actual relation of the profession to homœopathy, mark out the necessity of excluding from this Association three classes of practitioners; first, those who really (and some of them honestly) practise homœopathy; second, those of a mixed or bastard breed, who practise homœopathy, in combination with Mesmerism, hydropathy, allopathy, or *any-pathy* which the patient may fancy the most; and third, those who, under various pretences, hold professional intercourse with homœopathic practitioners. *(Cheers).*

It would be an unseemly waste of time, to prove before this assembly that homœopathy is a mere chimera—a system opposed to reason, common sense, and all medical experience; but I may be allowed to state in a few words what Hahnemannism is, and briefly to explain who are the incongruous crew who range themselves against us, under the flag of homœopathy. Three leading doctrines, or rather dogmas, were promulgated by the German dreamer:—First, that all diseases depended upon three inherent taints, the principal one being the itch, or psora, as he called it; second, that "like cures like"—*similia similibus curantur;* and third, the giving of infinitesimal doses. It has been often and elaborately shewn, that these dogmata, these chimeræ, have not only no scientific basis, but have neither facts nor even probabilities to rest upon. The statements made about medicines acting when divided into the millionth or decillionth of a grain, are so transcendently nonsensical as to be entertained even as a subject of consideration, for an instant, only by an unhealthy mind. The simple fact is this, that Hahnemann's doses cannot be demonstrated to exist, and are so small, that the mind of man can form no conception of their minuteness. Some homœopaths repudiate, in a sort of half-and-half way, the small doses; but the public who fee homœopathic doctors, generally conceive that their medicines are given to them in the attenuations of Hahnemann, in quantities ranging from a millionth to a decillionth of a grain. "Little pills" were yesterday lauded

by a platform speaker at the Homœopathic Meeting in Freemasons' Tavern; but his laudations were perhaps applauded by men who give as freely, or more freely than many of us would dare to do, strychnia, aconite, and other such like drugs, the most terrible doses of which may be administered in drops, and fractions of a grain. Large doses of our common medicines, as I well know, are also every day prescribed by men who come forward as candidates for homœopathic practice among the wealthy and the noble. "Little pills" may be, but certainly a little quantity of physic is not a criterion by which to know the practitioners who range themselves under the flag of homœopathy. Dr. Quin openly advised what I may term very large doses of camphor in cholera; and in my own experience I have found that patients had been taking, along with the globules, (under the name of adjuvants), the same medicines, and in the same doses, which we employ, and which experience has sanctioned. What is now called homœopathic practice, may, I aver, mean any kind of practice. (*Hear, hear.*) I have said enough to show you how vain it is to define what is meant by homœopathic practice, when I mention that, at a recent meeting of the Annual Congress of homœopathists, there was present, as a large participator in the business, Dr. Wm. M'Donald, who, besides being a homœopathic practitioner, is a leading man as a believer in, and lecturer on, the highest degrees of Mesmerism. Then Dr. Macleod (whose autobiography I hold in my hand), the keeper of a water-cure inn at Benrydding, in Yorkshire, is a chosen champion of homœopathy,—a man whom the *Homœopathic Times* delights to honour, and who treats his patients by globules and wet sheets. Dr. Henderson, of Edinburgh, Dr. Calvert Holland, and Mr. Kingdon, of London, prescribe infinitesimal or ordinary doses, according to their own or their patient's fancy. I select these gentlemen as my examples, because their acts are before the public, in print. The medical creed of these practitioners it is impossible for us to comprehend. They are, however, a large and increasing class; and on that account they seem to claim special attention in our Report. It is, then, the opinion of the Committee, that both the real homœopathic practitioners, and those who practise homœopathy in combination with other systems of treatment, ought not to be members of this Association.

But, besides the legitimate and the bastard homœopaths, there is another class of men who have no right to be associated with us in this Society. Regarding this class, I wish to say little, but that little must be plain, and it is this:—that we must not—not one member of the Association must for the future hold professional intercourse with those traitorous men who meet at the bedside with practitioners whose medical creed and character I have (though perhaps too mildly) depicted. A broad line of demarcation must be drawn, and it must be done this day. (*Loud cheers.*) Private friendships have perhaps made some of us too long in adopting this painful, but only right course. To error or imposture there never can be made an honourable concession. (*Hear, hear.*) I would here remark, that no retrospective legislation is contemplated; nor is it proposed to enact new laws to-day. We only wish certain general principles to be sanctioned, as the basis upon which laws for the future governance of the Association are to be framed, and afterwards submitted to the next annual meeting for ratification. By adopting this course, the respectability of the Association will be sufficiently guarded and maintained; and no one will be able to bring against it the charge of having acted precipitately, or under the influence of excitement. (*Hear, hear.*)

One of the most curious features of the homœopathic quackery is this, that while its professors vilify the science of medicine as we follow it, and abuse us through the press, the platform, and the pulpit, they yet eagerly seek their credentials from our Colleges, and even try to enter our more private Medical Societies. This, however, must not be allowed; and it is incumbent upon us, as representing the medical practitioners of England, to tender

hearty thanks to the Scottish Colleges and Universities, for their repudiation of homœopathic practitioners.

The mention of *the pulpit* brings to my recollection a topic which cannot be passed over, and which I approach with feelings of the deepest pain and sorrow. I will not yield to any man in my respect for the sacred office of the ministry; myself the son of a clergyman, I have always felt that the only other calling more noble than our own is that of preaching the everlasting Gospel; but, when clergymen assail us from the pulpit, and injure our influence with our patients, by their zeal in converting proselytes to Hahnemann, neither delicacy nor duty can justify our silence. Numerous facts have been laid before your Committee, from which we have ascertained, that in some districts of the country the zeal with which the clergy have taken up quackery knows no bounds, and many of our brethren have had their patients wiled away, by clerical canvassing, to homœopathy, hydropathy, and Mesmerism.

I would not have ventured, however, to bring this prominently before you, did I not hold in my hand a sermon preached by a rev. vice-president of the Hahnemann Hospital, in Bloomsbury-square, from which it is necessary that I should read some extracts. The preacher was the Rev. Thomas R. Everest, Rector of Wickwar. He selected his text from the Gospel of St. Matthew: "And as ye go, preach, saying, the kingdom of Heaven is at hand: heal the sick, CLEANSE THE LEPERS, raise the dead, cast out devils: freely ye have received, freely give."—Chap. x, 7, 8. In this text the rev. gentleman finds revealed the doctrine of Hahnemann! But I will give you his own explanation of the words of the Evangelist,—"Heal the sick and cleanse the lepers. *Cleanse the lepers?* Why pick out disease at all from amongst all the ills of men? And if so, why that particular one? Why not blindness, or madness, the stone, or the dropsy, rheumatism, or the gout?" (p. 29.) The leprosy of St. Matthew, and the psora of Hahnemann, are the same thing. That, in fact, is the grand idea of the sermon.

This reverend vice-president of the Hahnemann Hospital broadly and plainly proclaims from the pulpit of St. Augustine, Cheapside, that our Saviour's atoning sacrifice was scarcely available to fallen man till Hahnemann appeared. (*Sensation.*) Bear with me while I read a short passage to make good my assertion. It is almost too bad to read aloud; but I must do so, to save me from the charge of misrepresentation. "At the fall of man sin entered into the soul, and disorder into the physical frame (with which that soul is connected) at the same moment. God sent his Son to repair the mischief, and he bade his ministers preach the Gospel, and heal the sick; that is, cure the moral disorder and the physical disorder together; and for 1,900 years that precious wisdom has cried in the streets unheard. The preacher of the Gospel, not aware that that Gospel could never have free course until the physical leprosy of man was cleansed, and his chronic tendencies cured, has handed over to a separate profession the business with which his Lord entrusted him. And that profession, unconscious of its privileges, its duties, its powers, has, so to speak, ignored the whole question. It leaves those mad whom it might have cured, or it maddens men by large doses of powerful medicines; and then we wonder at the crimes and folly that mark the career of man."

"Let us be assured, brethren, that there is in the Gospel of Jesus a life, a power, a spirit, which is so much in harmony with man's happiness, and brings with it so much good, that if it had been understood by those who teach it, and had had fair play, it would long ago have altered the whole face of society. But in spite of Moses, in spite of Jesus, in spite of the law of Nature, alike deaf to God's voice and blind to facts, the medical profession has left the leprosy of the flesh to entwine itself with the leprosy of the soul. Between the two, man's tendencies to sin are increased by the disorder of his

reason, caused by the abnormal working of his machinery; and the Gospel finds in that individual in whom God intended that all should be normal, but with whom it can only communicate by means of nerves in a chronic state of irritation and a brain in discordant working, not a gentle convert but a hardened criminal, a perverse unbeliever, a furious fanatic, or an eccentric, unreasoning lunatic. But old things are passed away, behold all things are new made unto us. Let us now see what the new system proposes to do for the human race" (pp. 40, 41). That is to say, let us see how homœopathy is to render available the hitherto almost useless Gospel of Jesus Christ—unable, till Hahnemann appeared, to make head against "large doses of powerful medicines".

The preacher traces all the diseases and vices of the human race to our "frantic medicines": and this he brings out in many parts of the sermon: and, as example, I quote one paragraph—it is his appeal to the pockets of his audience on behalf of the Hahnemann Hospital:—

"Mothers! do you wish to see your children washed clean of that leprous tendency to disease which fills our grave yards with sweet young flowers cut off untimely, and which, to those who survive, transmits a legacy of pain, sin, and sorrow? THEN AID US! Fathers! do you wish to see your sons grow up faithful Christians, and sensible men, with a normal allowance of health, able to use calmly the reason which God has given to man for his comfort here, far from all extravagance, and all eccentricity, holding a course of life steady, reasonable, religious—such a course as man, healed, God-fearing, and intellectual, should hold? THEN AID US! Governors of God's heritage, monarchs, parliaments, magistrates! There is a gloomy thunder-cloud collecting on the horizon, rolling its deep masses over the face of day, threatening, lurid, portentous; but no man knows exactly of what. It is called Socialism, Communism, the Rights of Man, the Rights of Labour, the Red Republic. It is earnest, dark, sombre, avenging. It has been lashed up by hunger, low wages, glaring inequality, wicked passions of psoric origin, roused by alcohol and medicines, maddened by burning eloquence. It has no strain of gentleness in it. It is arrested by neither ridicule nor menace. There is not one smile, or one jest hidden beneath its fantastic Swirls. The sword has cleft it, but it re-unites more baleful than before. The cannon has poured its hail against it, but it rolls on as dense and as red as ever. The priest has cursed it; society trembles to hear of it; but there it hangs, in the calm that precedes the earthquake; baffled, perhaps, but biding its time till the 'hour come, and the man'. Shall I teach you to draw the lightning quietly from it ere it bursts upon your throne and your altar, and piles all your institutions into one heap? AID US!"

I must still inflict two other extracts upon you: they give more concisely than any other which I can select, the preacher's contrast between homœopathy (which he designates the "Good News of Great Joy"), and our system of medicine, which he maintains to be the origin of "gaols and gin-palaces; terrible crimes, for which scarcely the siege of Jerusalem could find a parallel; bands of prostitutes gathering round the dome of St. Paul's", etc. etc. After pointing out that from the womb the infant must be prepared for heaven by means of globules, he thus announces the result of such treatment:—

"The medicine of love has prepared the soil for the Gospel of love. The seed of the Word will soon strike root in such a soil, and bring forth much fruit; not the fruit of thievery and crime, afflicting folly and snarling religion, that exist at present, but a wholesome crop of sensible actions and sound opinions ripened by the steady rays of reason and religion. Growing up thus amidst calm, and sunshine, and love, and harmony, induced by the medicine of harmony, the education of the young candidate for heaven commences. The first care of the parents is, by proper dynamic medicines, (for

medicines in a brute, material state, having a totally different action on the human organism, are perfectly useless, or rather merely injurious) to eradicate all those psoric tendencies which cause or increase all our aches, pains, ill tempers, obstinacies, rebellions, cachexies, and all chronic diseases. Life in the beginning does so long for harmony, that if thus gently aided, it soon overrides all discordant tendencies. The molecular attraction proceeds normally. The infant developes into a normal child of the normal type, in whom all tendencies to irregularity, whether of body or mind, growth or disposition, are much weakened and simplified. It has never been exacerbated by frantic doses of powerful medicines, never been excited by poisonous diet, never been beaten into obstinacy, never imitated the quarrels of its elders, never been spoiled into selfishness, never indulged into evil tempers; continuing the physical education, and watching carefully the cries which life utters for assistance, in order to relieve her just where and when she wants aid—never by mere palliatives, but always by dynamic remedies, whose energumenic power, akin to life itself, has been subtilly awakened and called forth from the brute mass in which it lay slumbering, and, if well chosen, will, by its unfailing elective attraction, restore to life at the very spot, by the very nerve wherein it labours, the very FORCE in which it is deficient—you commence the moral and religious training of the child. Plain, simple, easy, and charming, is THE GOOD NEWS OF GREAT JOY." (pp. 48, 49.)

So much for "the medicine of love": now let us hear one or two of his sentences regarding our system:—"There was once a marriage made in heaven; but you put asunder those whom God joined together in heaven when you separated the healing of the sick from the preaching of the gospel, and made two professions out of that which Jesus made one; and therefore it is that the art of cure separated from the holy principles of love has lost its way, and fallen into foul company, and consorted with all unloveable things—cathartics, moxa, the lancet, emetics and blisters." (*Laughter.*) "And therefore, too, the Gospel parted from its earthly yoke-fellow, and preached by those who share in the sickness and leprosy of the race, has succeeded so partially, and brought forth the harvest of contradictions that you see in the Christian world." (p. 35.)

Now, sir, you have perhaps had more than enough of homœopathic divinity; but I was anxious to let the preacher speak for himself. Remember that Mr. Everest is vice-president of the Hahnemann Hospital—that the sermon was preached in aid of that establishment, which is under the immediate patronage of much of the wealth and aristocracy of this country. Advertised upon this sermon we find, as hospital office bearers, (along with the name of the preacher), his Excellency the Chevalier Bunsen, his Grace the Duke of Hamilton, the Earl of Wilton, the Earl of Shrewsbury, Lord Robert Grosvenor, M.P., and many others, prominent in society, both for rank and riches. To such lists we are generally referred triumphantly: and I admit that it would not be difficult to add to them the names of several members of Parliament, noblemen, bishops, and, at least, one archbishop—Dr. Whately: but alas! has not the train of St John Long, and many other noisome London quacks, been swelled by a similar throng of noble and reverend personages? Might not the same authorities be cited on behalf of the flimsy impostures of the present idol of fashionable fools, Mademoiselle Julie? Medicine cannot be acquired in leisure hours; it must be learned by patient and painful study at the bed-side and in the closet; and I have therefore yet to learn that statesmen and archbishops, even though they be good men, are authorities in matters of medical experience. Not all the coronets and mitres in England can give dignity to error, or transform a lie into the truth; and layman though I be, I hesitate not to proclaim in this public Christian assembly, that the sermon from which I have quoted is replete with quackery, heresy, and impious doctrine. *(Applause.)*

There is one other point in our Report which requires notice, and it is a recommendation to give great publicity to our determination not to have any kind of professional intercourse with homœopathic practitioners. It is necessary that the public be told authoritatively, and through the usual channels of information, that *they must select;* that, as for us, we positively refuse, *under any pretext whatever*, to hold professional intercourse with such persons; that with them we have no principles in common, and that, therefore, to take fees for meeting with them, would be something worse than degrading,—it would be appropriating money under false pretences; for a consultation without common principles would be a mere sham—it would be no consultation at all. *(Hear, hear.)* It is in this way that the public will be led to inquire into what homœopathy is; for I feel persuaded that not one in a thousand of its dupes has the slightest conception of the vastness of its absurdity, and the Protean wiles with which—setting honesty, consistency, and common sense, at defiance—it bewitches the sick and the silly.

Without further introduction or comment, I now read the

REPORT ON IRREGULAR PRACTICE.

Brighton, 14*th August*, 1851.

Your Committee have, after consultation with numerous members of the Association, maturely considered the subject referred to them, and beg respectfully to suggest the adoption of the following Resolutions:

1. That it is the opinion of this Association, that homœopathy, as propounded by Hahnemann, and practised by his followers, is so utterly opposed to science and common sense, as well as so completely at variance with the experience of the medical profession, that it ought to be in no way or degree practised or countenanced by any regularly-educated medical practitioner.
2. That homœopathic practitioners, through the press, the platform, and the pulpit, have endeavoured to heap contempt upon the practice of medicine and surgery as followed by members of this Association, and by the profession at large.
3. That, for these reasons, it is derogatory to the honour of members of this Association to hold any kind of professional intercourse with homœopathic practitioners.
4. That there are three classes of practitioners who ought not to be members of this Association, viz.,—1st, real homœopathic practitioners; 2nd, those who practise homœopathy in combination with other systems of treatment; and 3rd, those who, under various pretences, meet in consultation, or hold professional intercourse with, those who practise homœopathy.
5. That a Committee of seven be appointed to frame laws in accordance with these resolutions, to be submitted to the next annual meeting of the Association.
6. That the thanks of the Association are eminently due, and are hereby given, to the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh, for their determined stand against homœopathic delusions and impostures.
7. That the thanks of the Association are also due, and are hereby given, to the Universities of Edinburgh and St. Andrew's, for their resolution to refuse their diplomas to practitioners of homœopathy; but the Association feels imperatively called on to express its disapproval of any school of medicine which retains among its teachers any one who holds homœopathic opinions.
8. That these Resolutions be printed, and transmitted to all the Medical Licensing Bodies and Medical Schools in the United Kingdom; and that they likewise be inserted in the *Times* newspaper, the *Morning Post*, the *North British Advertiser*, *Saunders's News Letter*, all the British and Irish medical periodicals, and in such other journals

as the Council may sanction upon the recommendation of the Branch Associations.

In proposing these Resolutions for the adoption of the Association, your Committee are anxious to state that they are actuated by a strong sense of the importance of the subject in its relation both to humanity and morals. They most conscientiously believe that the countenance afforded to the form of charlatanry herein alluded to, is detrimental to the true interests of the public, as it is subversive of that strict integrity which ought to characterize practitioners of medicine, and which has ever distinguished the profession in these kingdoms.

John Rose Cormack, M.D. Edin., Fel. Royal Col. Phys. Edin. (of Putney).
James Tunstall, M.D., Edin. (of Bath).
W. H. Ranking, M.D., Cantab. (of Norwich).

[*The reading of the Report was followed by prolonged applause*].

Such, then, is the Report of your Committee. It has been carefully considered; and it was not framed till the opinions of many associates had been collected and weighed. We, therefore, earnestly, and with confidence, as to the propriety of the course indicated, ask you to adopt it as an expression of the sentiments of the Association. It is a plain, straight-forward manifesto; but I sincerely trust and believe that it does not contain one expression which is in any way distasteful to a single member who now hears me. We must not think of what we are about to do as a matter of good or bad policy—we must only feel that we are this day called on to maintain, in the face of the world, the honour of our noble profession; and to express, in simple phrases, what we conscientiously feel to be the truth. Let us say our mind plainly, firmly, and calmly. Silence would be far better than the giving forth of a feeble and uncertain sound. (*Cheers.*)

Dr. C. J. B. Williams (of London) said:—Having been asked, since I entered the room, to second the adoption of the resolutions, I cannot hesitate to do so. Unprepared as I am, I cannot help saying a few words on the subject, although, so far as I can judge from the demonstration of feeling which has greeted the report, the meeting seems pretty unanimous already. It might be a question, whether it is the province of this Association to take up matters of this kind, and express a decided opinion upon them. But I only ask, if you do not take them up, where is the body that will? You see all sorts of quackery, with homœopathy foremost, rampant through the land; deluding, by its unaccountable infatuations, the powerful, the learned, the rich, and, worse than all, the poor, in multitudes; and not only are riches placed at the command of the instruments of these fallacies, but what are far more precious, and, this is far more terrible to contemplate, the lives of our fellow creatures! In fact, there is at this moment throughout this country an awful system of trafficking or gambling with the issues of life and death, and a perilous tampering with the elements of mortality—nay, a jeopardising, not of the body only, but even of the soul! for who can say—where victims are hurried out of the world by a delusion, and for want of proper treatment—who can say that some of such might not have been saved alive, and given time for repentance as well as recovery? It is altogether an awful consideration; and I quite shudder when I look back at the number of melancholy cases which have come to my knowledge, where, at the eleventh hour, the regular practitioner has been called in when it was too late; when the precious time, in which medicine might have availed, had been wasted with homœopathy; and we could only shake our heads, and lift up our hands, and exclaim, "Alas! what folly!" and, I fear, we might add, "What knavery too!" (*Cheers.*)

But do not such heart-sickening scenes, do not the general interests of humanity and science, loudly call for some guardian influence to warn the

infatuated public with a voice of some authority? We naturally look to our Colleges, and to the corporate heads of the profession, who are, or ought to be, the guardians of the public health, and the protectors of the medical commonweal. But what have our Colleges done? With the honourable exception of the Edinburgh Colleges of Physicians and Surgeons, the aristocracy of the profession has done nothing. Then we must look to the practitioners at large; and I do think it most fitting that this great Association, so largely and ably represented at this numerous meeting, should speak out clearly and decidedly on this subject:—and your voice will, in truth, be the voice of the whole profession!

It is, indeed, high time that the profession should boldly and intelligibly speak out, for the public are profoundly ignorant in the matter: they really know little what homœopathy is, and still less can they perceive how utterly irreconcileable it is with all that is established and true in medical experience and science. I often hear people talking of medicine and homœopathy as merely exhibiting instances in which doctors differ, which they are privileged to do, and one side may be as right as another. It seems a common mistake that homœopathy is a new system of medicine, which may or may not be true; but that it is entitled, as much as the old system, to compete for public favour, and claim public confidence. Thus they make no distinction between that which has resulted from the accumulated experience of ages, which is continually undergoing the tests of judgment and experience at the hands of hundreds of thousands of regular practitioners throughout the civilised world; which is receiving innumerable accessions and improvements, from the careful labours and discoveries of skilful men, in all the departments of science and art ancillary to medicine; they make, I say, no distinction between this noble and enduring, although unfinished structure, and a wild chimera of the day, which, reared by a fanciful mystic, and worked out by his designing followers, is fostered and flattered into an ephemeral notoriety by the patronage of a few whimsical lords and ladies, and other well-known victims of charlatanry.

I say the public, and the profession too, ought to know a little better what homœopathy is;—I mean *honest* homœopathy, as propounded by Hahnemann, and practised by the consistent and genuine of his followers—not that dishonest mixture of homœopathy with hydropathy, and Mesmerism, and ordinary medicine, which I can only call professional swindling, and obtaining money under false pretences (*cheers*); which, if possible, is more disgraceful and disreputable than quackery itself. But genuine homœopathy needs only to be known to be scouted by all soundly-thinking men. You have heard enough to laugh at, to pity, and to deplore, in the extracts read by Dr. Cormack; but do you really know what is meant by infinitesimal doses, which are the curative agents in this system? In the *Times* of yesterday, there is a report of the proceedings of the Homœopathic Association; and the reporter, by way of ridiculing the whole affair, remarked, that probably any one of the ancestors of the speakers had taken medicine sufficient to have doctored all the homœopathic patients in Golden Square. But this shows that he did not know the value of an infinitesimal dose. Our ordinary doses could be reduced to homœopathic tenuity only by dividing one man's dose among ten thousand times—(I speak much within bounds)—ten thousand times the inhabitants of the whole earth! Such are the absurdities of the homœopath. In fact, they deal with figures and numbers that are quite incomprehensible and inconceivable. It is all easy enough to talk of the trecillionth and decillionth of a grain, but I would appeal to the chemist and the natural philosopher, who are accustomed to appreciate minute realities, whether such numbers are not nonsensical when applied to experimental agents? One of the most delicate tests known, sulphuric acid, might possibly detect one hundred thousandth of a grain of lead in solution; and perhaps the same might be said of chlorine and silver. But the one hundred thou-

sandth part of a grain would have to be diluted a million times more, before it would reach the homœopathic tenuity. And homœopathy teaches that the disease that attacks the body,—disease of the most destructive kind, tending to subvert functions and destroy structures—disease that is clogging the very springs of life—that such disease is to be counteracted by something a million times less than the smallest quantity to be detected by the finest chemical test that was ever discovered! It is by such preposterous notions as these that homœopathists delude themselves and the public. It is on such ineffable absurdities that fashionable fools rely for aid in sickness; and (who would believe it?) it is with men who profess and believe in such inanities that some of our profession have degraded themselves by consulting. I quite agree in the spirit of the resolutions, that there should be *no shadow of compromise;* and that under no pretext of meeting for diagnosis, for surgical aid, or for any other purpose, should there be any intercourse between regular practitioners and the abettors of this monstrous and mischievous delusion. (*Cheers.*) Believing, nay, knowing, as we do, that homœopathy is entirely a fallacy, we must feel it our bounden duty to discountenance it in every way, and boldly to warn the public against its mischievous sophistry and fatal infatuations. (*Cheers.*)

Dr. Crisp concurred in the Resolutions; but thought that they did not strike at the root of the evil—the relations of the government to quackery, and quacks.

Dr. Cowan of Reading said:—Allow me, Sir, to make a few observations in favour of the adoption of this report. I am not a raw recruit in the anti-quackery ranks, having for many years done my utmost to expose and denounce the numerous delusions of the day, especially those affecting our own noble science. I am rejoiced to see the hearty and healthful tone of feeling with which the report has been received; for it appears to me most proper and most important for this Association to take the present opportunity of pronouncing its formal and its unanimous (*cheers*) rejection of homœopathy. The increase of homœopathy, I look upon with a very grave view; I regard it as one of those portentous moral phenomena which are stealing over the age. It is not the *practice of medicine* only that is at stake—it is the *practice of sound thinking.* When we supplant by mushroom theories truths which have hitherto occupied the minds of men, and been tested and confirmed by the experience of ages;—when we bring into existence new phantasies of the human mind, and give them the outward formality of facts, we surrender the stability of our judgment, and depart from all soundness of thinking. With us, as medical practitioners, the rejection of homœopathy is a question of principle, not of doses,—a question of morals, and not of etiquette. (*Loud applause.*)

The man who believes in homœopathy is a mystic—his creed is at variance with all rational experience, and subversive of all previously acquired knowledge. He has lost the ballast of his reasoning faculties, and set at defiance all those means by which the human mind is regulated. I distrust his judgment upon any subject—belief in homœopathy is but the symptom of a mind without stay or ballast, liable to be driven hopelessly into any folly, ever ready to spurn to-day what it yesterday believed. Hahnemann, the founder of homœopathy, was an enthusiastic visionary who preferred the wretched mushroom spawn of an inflated self-esteem and an extravagant fancy to those slowly growing, and ever deepening truths which ages had accumulated, and the wisdom of the wisest and the best of men had augmented and confirmed. If homœopathy be true, then are we all believing a lie, as all our forefathers have done; but if it be utterly baseless and false—as in my inmost soul I believe it to be—it can only be regarded as a deadly parasite upon Rational Medicine, which ought to be boldly excised, and cast aside by every sound-thinking mind.

This is an age of moral and intellectual anomalies not in physic only, but also in divinity. We have amongst us the monstrosity of Romish doctrines being consistent with Protestant preferment (*Hear, hear*), and the equally anomalous paradox of men educated as members of our honourable profession availing themselves of their titles and degrees while adopting and practising opinions which if previously avowed would for ever have excluded them from their present qualifications. Were a homœopathist a consistent and honest man, he would at once disassociate himself from a school whose best philosophy he proclaims to be a lie, and spurn a diploma which only pledges him to error. To eject homœopathic practitioners from our ranks, and exclude them from professional fellowship, is no act of tyrannous intolerance or bigotry, but a necessary measure of self-respect and self-defence—a consistent testimony to the principles we profess—the only method of extricating truth from apparent alliance with what we unhesitatingly assert to be a folly in philosophy and a dangerous delusion in practice. (*Applause.*)

In discussing homœopathy, I do not attempt its refutation by merely pointing out its arithmetical absurdities, and physical improbabilities; but I banish it at once beyond the pale of discussion, and class it amongst the fallacies too extreme for investigation. If a man say to me "Two and two make *five*," I do not speak to him twice; the man is *gone;* and if a man profess to me his belief in homœopathy, I am apart from him for ever. (*Repeated cheers.*) He admits as facts things at variance with rational experience, and in these circumstances I must stand aloof from him. (*Long-continued applause.*)

We have read of *mental epidemics* in the middle ages, but we are apt to forget how extensively they prevail in our own. In the midst of such restless excitement, such morbid extravagance, to adhere to the "old paths" and to sobriety of judgment, is no easy task. To be for ever seeking *first principles*, and to be without a standard *within*, by which new pretensions can be tested, is the condition of multitudes of all classes among whom we live—it is one of the most dangerous characters of an age of over-heated intellectualism. We rush wildly forth upon the field of experiment, mistake our fancies for facts, our expectations for principles; and are soon hopelessly enrolled in the rapidly swelling ranks of the deluded and deluding.

But I must not farther enlarge. Let me only say in conclusion, that to me our present duty seems very plain—it is to repudiate principles at variance with an honourable and a rational profession. Whether as an Association we perish or survive, let us nail our colours to the mast, and sink or swim in the good old ship of Rational Medicine. (*Cheers.*)

The motion was put from the Chair, and unanimously agreed to.

The following Committee were then appointed in terms of the fifth Resolution.—Dr. Cormack of Putney, Dr. Tunstall of Bath, Dr. Ranking of Norwich, Dr. Malden of Worcester, Dr. C. J. B. Williams of London, Sir Charles Hastings, M.D. of Worcester, and Dr. Cowan of Reading.

The Address in Medicine. Dr. King of Brighton then read the "Address in Medicine," which was warmly and justly applauded. It has since been published by Mr. Churchill.

A vote of thanks, proposed by Dr. Malden, and seconded by Dr. Hodgkin, having been unanimously carried, the President "feared to say anything on the subject, after the truly eloquent address from Dr. Malden on the eloquent paper of Dr. King. To his colleagues in Brighton, there was nothing in it to surprise them, because they knew his excellent character, and his goodness of heart (hear, hear); but he hailed it with delight, that such a paper should have been read to this meeting of the Association by a physician of Brighton."

The vote of thanks was carried by warm acclamation.

The Anniversary Meeting for 1852 was fixed to be held at Manchester; W. J. Wilson, Esq., of Manchester, to be President-Elect.

Communications. Several hours were then devoted to cases and papers.

Mr. Caleb Williams (York) read a paper on the change, during the last thirty years, in the types of disease. Dr. R. Hall read a paper entitled "Observations with Hutchinson's Spirometer." Dr. Sibson exhibited an improved form of his "Chest Measurer." Mr. Smith (Southam) read a curious paper, tending to show that the diminution of the age of man since the creation, had not been *gradually*, but by jumps; and that in each case, some great sin, such as pride, lust, idolatry, hardness of heart, had been precedents of those changes. He enforced the importance of our adopting the opposites of these, which might have the effect of diminishing disease, and prolonging life. Mr. Bottomley read a paper, detailing the successful treatment of a curious case of gangrene in the foot and leg. Mr. Domville read a paper on the causes of deafness. Dr. Crisp read a paper, the object of which was to show that kousso was not absolutely a specific for tape-worm. Mr. Hunt read a paper on the skin, as a diagnostic of health. Dr. Oldham read a paper descriptive of a successful Cæsarean section under chloroform. He recommended an opening from below, as small as possible, to be afterwards enlarged according to necessity, instead of resorting at first to the major operation, so as to avoid excessive hæmorrhage.

Dr. Conolly moved a vote of thanks to the President. The motion having been seconded by Dr. Hodgson, was carried by acclamation.

The President returned thanks, remarking that their kind expression of feeling towards him would be always a gratifying recollection.

An adjournment now took place, at five o'clock, to afford an opportunity for the members to prepare for the dinner, which took place in the Royal Banqueting Hall, recently restored by the Brighton Town Commissioners; and scarcely less gorgeous than when used for the reception of royal guests in the time of George IV, under whose immediate direction it was designed, built, and decorated.

Dr. Jenks, the President, ably filled the chair. Although many had to start for their distant homes before dinner, there were about 250 present, including in addition to the members, Dr. Paris, President of the College of Physicians; Mr. South, President of the College of Surgeons; the Bishop of Chichester; the Rev. H. M. Wagner, Vicar of Brighton; the Rev. T. Cooke; the Rev. S. R. Drummond; Rev. J. Nelson Goulty; Montague Scott, Esq., High-Constable of Brighton; W. Furner, Esq., Judge of the County Courts of Sussex; Eardly N. Hall, Esq., Banker; Lewis Slight, Esq., Clerk to the Brighton Commissioners; P. R. Wilkinson, Esq.; Jacob Bell, M.P.; Mr. Jackson of Boston, U. S., etc., etc. The band of the 1st Dragoons (Royals) played before and during dinner. The party broke up about midnight.

TO OUR READERS.

Our desire to give a full report of the important proceedings of the Provincial Medical and Surgical Association, has caused the omission from this number of the Appointments, Obituary, and various short articles of Miscellaneous Intelligence.

We congratulate the profession on what has been so nobly done for the vindication and preservation of its honour by the Association. The Resolutions could not be better, or more explicit. It must be gratifying to those who took a lead in the business, to find that their exposures of homœopathy have caused a cry of agony to issue from the charlatanic press, which tells of a wound.

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ORIGINAL COMMUNICATIONS.

ON THE VAGINAL, OR DEEP BURSÆ MUCOSÆ.

By WILLIAM COULSON, Surgeon to St. Mary's Hospital, etc.

My former paper[1] had for its object an examination into the nature of the superficial or subcutaneous bursæ, to show in what respect they differ from all other structures, and more especially from the deep or profound bursæ. My present object is to consider the nature of the deep bursæ. By deep bursæ mucosæ, I mean the synovial membranes, usually vaginiform, interposed between two or more tendons, between tendon and bone, or between tendon and ligament, for the manifest purposes of protecting the structures from the injurious effects of friction, and of facilitating motion.

In the upper extremity, where we have chiefly to deal with morbid conditions of these bursæ, the synovial membrane extends downwards as far as the distal insertion of the tendons, and upwards for some distance beyond the fibrous sheath. Each tendon is covered by a reflexion of this vascular membrane, and is loosely attached in the whole, or in part, of its course, to the walls of the canal, by a fold similar to the mesentery, and called meso-tendon. These folds limit the movements of the tendons in a slight degree: they may be torn by some violent movement, and are occasionally the seat of disease.

Anatomical Arrangement. Upon the dorsal surface of the wrist, there are distinct sheaths,—1. For the extensor carpi ulnaris; 2. For the extensor minimi digiti; 3. For the extensor communis digitorum and the indicator; 4. For the extensor secundi internodii pollicis; 5. For the two radial extensors; and, 6. For the extensores ossis metacarpi et primi internodii pollicis. Any one or more of these sheaths may become distended, and assume the characters of a bursal swelling. There are also five or six thecal sheaths on the palmar surface, and these are the most frequent seat of enlargement. Enlargement of the bursæ in this situation is a most formidable disease.

[1] London Journal of Medicine, January 1851.

The sheaths of the extensor ossis metacarpi, and of the extensor primi internodii pollicis, and of the extensor carpi radialis longior and brevior, merit special anatomical notice, as they are often affected with morbid changes. The two first, free in their fibrous sheaths, but covered by the same visceral layer of synovial membrane, can only be partially separated; and there are some anatomists who regard the two tendons as divisions of one and the same muscle. The two extensors of the radial side of the wrist are likewise retained in apposition by a common visceral layer of membrane, as far down as their point of separation to their respective insertions. The synovial membrane there leaves the extensor carpi radialis brevior, being continued only over the extensor longior. Throughout their whole course a meso-tendon attaches them to the posterior wall of the sheath.

Along the anterior or palmar surface of the wrist and forearm we have two sets of bursæ; some small, and often overlooked, others of considerable size. The palmaris longus and brevis are each enveloped in loose areolar tissue, abounding in thick serous secretion; and it is easy to comprehend how such a structure would become converted into a complete synovial sac under favourable circumstances. About three months ago, I removed from the hand of a working-man a thick walled cyst, lying between the integument and the palmar fascia, and containing a sort of synovia. It had doubtless been originally a bursa, thickened by the constant pressure of the hand upon the hard iron handle of an immense hammer. The patient described it as originally a small elastic swelling, situated under a part of the hand where the skin had for a long time been very much thickened; as the tumour increased in size, it pained the hand, and, interfering then with his work, made him anxious for its removal.

The tendon of the flexor carpi ulnaris has a large and well-marked synovial sheath, especially loose and sac-like, near its insertion in the pisiform bone.

Finally, there are the general synovial bursæ, which invest the tendons of the flexor muscles of the fingers, and of which many different anatomical descriptions have been given. Fourcroy and Bichat affirm, that there is but one synovial bursa at the level of the carpus. Velpeau and Cruveilhier describe two, one common to the flexor tendons of the fingers; the other proper to the long flexor of the thumb. Monro, Koch, and Bourgery, enumerate a much greater number of bursæ in the anterior region of the wrist.

Some of the deep bursæ communicate directly with the joints. The bursa beneath the crureus muscle belongs to this order, likewise the large bursa below the iliacus and psoas; its frequent communication with the hip-joint is well known. On the other hand, there are some which greatly resemble the cellular bursæ in various stages of transformation towards the perfectly developed bursæ. Of this kind is the extended bursal arrangement around the tendon of the plantaris muscle; another, equally remarkable, is between the middle tendon of the omo-hyoideus and the sterno-mastoid; and a third interposes between the long abductor and extensors of the thumb on the one hand, and the radial extensors on the other.

These structures resemble in many respects the serous membranes, and are yet more closely allied to the synovial, with which, as I have

said, they are not uncommonly continuous. Upon their free surface we find a stratum of epithelium, supported by a basement membrane, and under this is a layer of blood-vessels, which may be filled with injection in a part rendered soft by partial decomposition. The blood-vessels form a net-work many layers thick. No one would suspect the existence of such a number of arterial and venous capillary tubes, from the examination of this structure in its normal condition after death. In many situations are found vascular fringes, first noticed by Havers in the joints, and described by him as the source of secretion of the synovia. They are found along the thecæ of tendons, and in some of the bursæ in the neighbourhood of the knee, and are composed of loops of vessels. Although we may not be able to prove experimentally what tissue secretes, and what absorbs the oily fluid contained in these sacs, yet we may infer, that both processes go on most actively wherever the blood-vessels are most numerous. The vascular part of the bursa seems to cease where the membrane is firmly attached to a bone, as along the phalanges of the fingers.

Symptoms and Pathology of Enlarged Vaginal Bursæ. In using the terms *superficial* and *deep*, I allude, of course, to the primary connexions of these structures, and in no way to the situations which they may subsequently acquire. A collection of fluid, either in the large theca of the flexor tendons of the forearm, or in a sac connected with this membrane, may make its way towards the surface so as to elevate the skin like the pointing of an abscess, and to render it thin and discoloured; and yet we must include this under the head of deep bursæ. The same remark may be applied to the bursa in the neighbourhood of the knee-joint, connected with the tendon of the semimembranosus muscle, which frequently becomes enlarged and projects into the popliteal space.

The clear albuminous fluid, secreted in the healthy state by these structures, undergoes various modifications by inflammatory action. At first it becomes thinner and more sparing than natural, and the part, when examined, communicates to the fingers a crackling sensation. Then it may be more abundant, and cause distension of the sac, attended by severe pain. If this affection be deeply seated, and beyond the reach of surgery, it gives rise to very considerable suffering, and excites symptoms which are not readily understood. If, for example, it occur in the bursa of the tendon of the psoas and iliacus muscles, it may be readily mistaken for incipient disease of the hip-joint. In course of time, the fluid of an inflamed bursal sac entirely loses its oily nature, becomes serous and watery, and is frequently of a yellow, or even reddish-brown hue, from admixture of blood.

But there are sometimes found, especially in the synovial theca of the flexor tendons of the wrist, numerous hard fibro-cartilaginous bodies, like millet seeds, floating loose in the distended sac. They have been improperly called hydatids, but are, in truth, growths from the vascular fringe of the membrane, projecting inwards towards the cavity, and covered by epithelium. As they increase in size, the pedicle connecting them with the membrane is eventually broken by the friction of the parts contained within. We have instances of similar bodies becoming loose in the cavity of a synovial sac, in certain rheumatic affections of joints. The enlarged bursa is not uncommonly

loculated, or divided into partitions by septa or bands. In general, however, the compartments readily communicate one with another.

The most frequent seat of enlargement is the synovial sheath, which invests the flexor muscles of the fingers, and extends from the forearm under the annular ligament to the palm of the hand. When distended by fluid, it produces a considerable elevation, which is often constricted and divided into two parts by the annular ligament of the wrist. The walls, when laid open, are found to be thicker than natural; the lining membrane is rough; the fluid contained within is opaque, yellow, or yellowish-brown, and thick, and it frequently contains those small bodies above-mentioned, which are smooth externally, and often hollow; some, however, are solid, of fibro-cartilaginous structure, and resemble grains of rice in general appearance. The cyst, when minutely examined, is generally found thickened and of fibrous structure; externally it is connected to the parts around by loose areolar tissue. Internally it presents a velvety or roughened appearance, and there proceed from it numerous fringes, of which some are pedunculated. Embedded in these fringes are sometimes those hard white bodies, which are frequently found free in the sac; some of them are elongated and seed-shaped, others flattened and triangular, or round. The smaller are generally solid; the larger contain a cavity. These bodies were described by Dupuytren as hydatids; and the term "hydatiform" has been applied to the bursal swellings about the wrist, under the idea that such parasites were the cause of the enlargement of the sac, and of the collection of fluid. Deviations, both in the quantity and in the consistence of the synovial secretion, may produce a peculiar condition of these fibro-serous canals, which yield upon pressure a crepitating or crackling sensation. This sound may be heard in whatever region of the body fibro-serous grooves naturally exist. It is commonly heard in the region of the shoulder-joint, where it is connected with a morbid condition of the sheath of the long tendon of the biceps flexor cubiti. M. Poultain relates a case, in which these symptoms gave rise to the notion of fracture; and in the *Lancet* for 1836, 1837, the late Mr. Wallace of Dublin mentions a case, where an affection of this kind, in the extensor tendons of the thumb of a young woman, had been mistaken for fracture. The same sound has been heard about the tendons of the hamstring, and behind the internal malleolus in the sheaths of the flexor muscles of the foot; behind the external malleolus, along the course of the tendons of the peronei muscles and those upon the instep, and in other parts.

Although violence is often assigned as the cause of this affection, its origin, in the greater number of cases, is obscure. It is more likely to depend upon the influence of some constantly acting source of irritation than on any sudden injury, and the symptoms which usher it in support this view. At times, indeed, there is at the commencement acute pain, which, however, gradually subsides when the part is at rest, and is excited only upon movement. But more commonly there is little or no pain felt by the patient, until he makes a greater effort than usual, when the attention is for the first time directed to the part. Upon awaking in the morning, the part is stiff, but the stiffness goes off after a little exercise. There is rarely either heat or redness;

the latter is generally secondary, and referable to accidental rubbing and friction. There is always some amount of swelling, the form of which depends upon the natural connexions of the part affected. If the disease occur in the sheath of the extensores ossis metacarpi and primi internodii pollicis, the tumour extends obliquely across the lower part of the forearm, from the ulnar to the radial side. If it affects the radial extensors, the swelling, wider below than above, passes over the inferior and outer part of the broad extremity of the radius. Any anatomist can tell in what groove this affection is situated, by making the patient move under his direction the different muscles of the forearm. In severe cases, the stiffness of the limb, the sensation of weakness, and the pain upon movement, are so considerable, that a man is unable to follow his employment; and, in the higher ranks of society, accomplishments, such as instrumental music, which require great freedom of movement, have to be suspended, or, indeed, entirely given up.

The manner in which these tumours shew themselves, is as obscure as their etiology. Sometimes a peculiar creeping sensation is experienced down the fingers, wrist, and forearm; at other times there is stiffness, weakness, and difficulty of movement. In other cases, it is the tumour which first attracts the patient's attention; and the symptoms above related are felt only at intervals, and after any greater exertion than usual. The shape of the swelling, as it affects the large bursa mucosa surrounding the flexor tendons of the fingers, is variable; sometimes it commences in the palm of the hand, at other times in the lower part of the forearm; and in both instances it soon becomes bound down by the annular ligament. Indolent, and painless upon pressure; fluctuating, and presenting irregular projections, it appears as a bilobed mass, upon which the fingers have an involuntary tendency to close. If the contents be steadily and forcibly squeezed downwards towards the hand, a movement may be communicated to the fingers, along whose thecæ the fluid is pushed. And during this examination, when the fluid is pressed backwards and forwards from one end to the other of the enlarged sac, a peculiar *frottement* is felt, upon which Dupuytren laid great stress as a diagnostic symptom.

The pain and sensation of weakness produced by such a tumour is so great, that the limb soon becomes useless; the fingers are permanently bent, and any attempt to extend them excites a dragging sensation along the entire cyst.

Cases occur, when the tumour is large, in which the ulnar artery and the superficial palmar arch are raised upon the swelling; the radial artery, too, may be separated from the bone, before it turns under the styloid process of the radius. The integument of the palm of the hand becomes thin from want of use, loses its transverse markings and lines; it is elevated into a soft, smooth, compressible swelling, extending, in severer cases, along the flexor surface of the fingers. Continued position of the fingers in this abnormal state, leads to permanent changes in their articulating surfaces, and in the ligaments which unite the bones one to another; hence it arises that in old cases, where the flexion has existed for a considerable time, the evacuation of the cyst, or the cure of the bursal enlargement, does not restore the mobility of the fingers.

Diagnosis of these tumours is not at all times so easy as many surgeons have affirmed. If situated on the palmar surface of the wrist, the bursa is recognised as a fluctuating bilobed mass, the shape depending upon the size of the sac, and the constriction of the annular ligament. But the contents may be of such consistence, that there will be no fluctuation. But the crepitation to which I have before alluded, produced by the passage of the fluid containing the hard grain-like bodies from one compartment to another of a sac, through a narrow orifice, may be taken as characteristic of the nature of the tumour, in connexion with the constriction produced by the annular ligament.

M. Robert, however, has recorded the following case of fatty tumour of the hand, resembling, in many of its physical signs, the affection which we are now describing. [*Annales de Thérapeutique*, tome ii.]

A young man, aged 27, a butcher, was admitted into the hospital, with a tumour of the size of half an orange, situated upon the ulnar side of the palm of the right hand. It was subcutaneous, soft, and elastic, giving a peculiar crackling sensation upon pressure, and lying in front of the flexor tendons: it was trilobed, and deeply grooved. The fingers were slightly flexed upon it. The patient had noticed it first when about twelve years of age. It remained stationary till three years ago, when it suddenly increased in size. After an exploratory puncture, a crucial incision was made, and the skin was reflected back, when a tumour was exposed, composed of two portions set one within the other; the inferior flat, but deeply hollowed in the middle; the other portion of a cylindrical form, lodged in the hollow of the preceding. The second portion was moveable upon the first; and the friction thus produced, communicated to the hand the "crepitating sensation" above referred to.

An important point of diagnosis, rendered more valuable by accurate modern research, is derived from the consideration of the natural connexions of the bursal sac affected by disease. The origin of the tumour, its inclination rather towards the ulnar than the radial side, the effect produced upon the fingers, the free movements of the thumb,—these are points which indicate that the disease originates in the bursa of the general flexor tendons. The circumscribed swelling of the radial side of the hand, the weak condition of the thumb, the inability on the part of the patient to bring it into firm apposition with the rest of the hand, pronounce the bursal affections to be limited to the tendon of the flexor longus pollicis.

Prognosis. Many years may elapse before these tumours acquire any great magnitude. Slow in their growth; often painless; obscure in their origin; they pass unheeded, especially among those whose occupations require neither the exercise of great strength, nor the application of great delicacy of touch. Ultimately, after years of enlargement, they become stationary, but they do not disappear; at least, there is no satisfactory case of the kind upon record. All, then, that we can expect nature to effect, after the establishment of the disease, is the arrest of the further enlargement of the tumour.

As regards the serious nature of these affections, those tumours confined to a single finger, often limited in extent, are less to be feared than those in the palm of the hand, involving the entire bursa, and

requiring the performance of an operation, which, though simple as regards execution, may be followed by dangerous symptoms.

Treatment. It is customary, in the chronic cases, to employ counter-irritants, such as blisters, irritating ointments, etc. The emplastrum ammoniaci cum hydrargyro, spread upon leather, may be applied to the limb, and secured by a firm bandage; the whole to be worn for several weeks. If the fingers are stiff, friction of the limb and passive motion may be resorted to, when the swelling has in great measure disappeared, and the fluid is nearly absorbed. The arm may be soaked and rubbed in a warm arm-bath daily. When the limb is immersed in a heated fluid, much greater force may be used with impunity, than under the ordinary circumstances.

The operations which have been recommended for the cure of these synovial tumours are the following: — Extirpation; incision, either simple or combined with irritation of the surface of the cyst; subcutaneous puncture; and iodine injections.

As regards extirpation, it is extremely difficult, on account of the extent of the connexions of the sac.

I have generally contented myself with making an incision longitudinally through the most prominent part of the swelling, and evacuating the contents. Some amount of inflammation usually supervenes; and the cavity becomes obliterated in the usual manner. But there is a risk of the inflammation proving very severe, and extending along the muscles of the forearm, attended with a high degree of fever and constitutional disturbance. Death has ensued from such an attack; and in other cases, in which the inflammation has been subdued by active treatment, the mobility of the fingers has been permanently impaired.

Case. Maria Hughes, aged 63, thought that she had run a splinter, about nine years ago, into the skin over the palmar surface of the first bone of the right fore-finger. A swelling of the size of a small nut soon afterwards appeared, and continued slowly to increase to a tumour of considerable size, extending from the first bone of the finger along the metacarpal bone. The swelling was very tense, projecting into the palm of the hand, but well defined, and not reaching beyond the palmar region of the fore-finger; the thumb and middle finger were free, and the dorsal surface of the fore-finger was natural. The motion of the fore-finger only was impeded. In August 1850, I made a free incision into the extremity of the swelling over the first phalanx of the finger, and evacuated a wineglassful and a half of concretions of a lozenge shape and size. After evacuating the cyst completely, I placed a compress over the part, and used firm pressure; but severe constitutional symptoms, almost threatening the life of the patient, ensued; the pressure was obliged to be removed, and warm poultices applied. An abscess formed at the other extremity of the swelling, and another at the dorsal surface of the finger. Both were freely opened, and a good deal of pus evacuated. The opening at each extremity of the swelling discharged freely; and after three months the walls of the sac united. At the present time there is a slight thickening in the course of the sheath, and the second and third phalanges are bent backwards. She has but little motion yet of the finger. Mr. Toynbee analysed the bodies which were evacuated from the cyst for me. He says: "The bodies which you sent me consist of gelatinous matter,

enclosed in a very delicate membraneous capsule. Upon microscopic examination, this matter is found to be composed of a homogeneous jelly-looking substance, without the presence of any corpuscles or nuclei. I have frequently examined the gelatinous matter removed from enlarged bursæ at the back of the wrist; and I have found it to have the same composition as the bodies you sent me."

The use of the seton may lead to results difficult of management, and even dangerous to life. The following case, recorded in the *Leçons Orales* of Dupuytren, shows how a fatal result may follow its employment.

Case. A carpenter, aged 35, received (Dec. 1812) a sprain in the right wrist, which healed in a short time without trouble. About two or three months afterwards, he remarked a small tumour in the palm of the hand below the annular ligament, and soon afterwards a second above the ligament: they were at first very small, and but little troublesome. They impeded at first the free exercise of the hand, and afterwards prevented its motion altogether. Being unable to continue at his trade, he consulted M. Dupuytren, June 7th, 1814. From its position, the nature of the tumour was suspected; and examination rendered the point clear. The following day, an incision was made into both tumours, and a multitude of little white bodies immediately escaped. The aponeuroses of the hand and of the forearm were liberated by means of a blunt-pointed bistoury, that there might be no constriction in the event of inflammation. A seton was introduced to inflame the walls of the cyst; and a poultice was then applied to moderate any inflammation that might arise. Severe pain supervened on the evening of the operation. It increased, accompanied with great swelling, on the second, third, and fourth days; a greyish fluid, mixed with flakes of lymph, flowed from the wound. The seton was removed the fifth day. The inflammation extended to the arm, and to the axilla; and constitutional symptoms of the most distressing kind arose on the eighth day; some gangrenous aponeurotic structures were divided. An abscess, which had formed between the first and second metacarpal bones, was opened. Compression expelled a quantity of pus, which had formed sinuses the whole length of the forearm and hand. On the tenth and eleventh days, there were shiverings, with convulsive action of the jaws, lasting about ten minutes. The pus was extremely fetid. There was general weakness, which resisted the most powerful tonics; and death ensued on the fifteenth day from the operation.

This case made a great impression upon Dupuytren, who for the future changed his mode of operation. In place of a simple opening in the most prominent part of the tumour, he made large incisions; and substituted for the seton a piece of lint interposed between the edges of the wound, to prevent their union. Mr. Syme of Edinburgh, impressed with the same fear of constriction in these cases, has recommended the preliminary division of the annular ligament, as was suggested a long time ago by Warner. Mr. Syme has published a successful case in the *Edinburgh Monthly Journal* for October 1844.

Professor Gerdy has successfully practised the subcutaneous incision; and such an operation has much to recommend it, as there is not that fear of the severe inflammation which often attends the exposure of the cyst. The operation should be combined with pressure;

still, though less dangerous, it is also less sure than incision, and there are many cases in which it is impracticable.

Iodine injections have been recommended by Velpeau in the treatment of these bursal enlargements, but many objections have been raised against the practice, on account of the chance of severe inflammatory disturbance. I am inclined, however, to recommend this plan for adoption.

M. Chassaignac has related a case in the *Gazette des Hôpitaux*, in which, after having evacuated the fluid, he injected through a canula, first some warm water to clean out the cyst, and next some tincture of iodine. The cyst was then emptied, moderate pressure upon the walls was exerted by means of a compress, and the opening made by the trochar was properly secured. Some inflammation supervened; but it yielded to treatment, and the case terminated favourably.

An analysis of the cases in which this treatment has been tried is decidedly favourable to the practice, although I am not quite prepared to agree with Michon, that there is less chance of inflammation than of relapse and the re-collection of the fluid. An attack of inflammation of the hand is always a serious matter, often so impairing its movements, as no subsequent endeavours on the part either of the patient or of the surgeon may be able to rectify.

Professor Bouley has demonstrated the superiority of iodine injections over other means of exciting inflammation, and he has succeeded thus in dispersing tumours of large size, without danger or inconvenience. If therefore simple puncture or incision should fail in the first instance, I recommend this practice as far preferable to the introduction of setons and other foreign bodies.

It must not be supposed that the surgeon has effected all his task by the evacuation of the fluid and the obliteration of the cyst. There remains for him to restore the mobility of the fingers, long since become stiff, semi-flexed, and in great part useless. For this purpose he must recommend exercise, passive motion, baths, etc., and by perseverance the hand may again be brought into a useful state.

It is singular that this affection of the bursa of the flexor muscles of the forearm and hand should be rare in the corresponding structure in the lower extremity, more especially considering how the foot is compressed in tight boots, and exposed to constant violence and injury. A case, however, of the kind is related in the *Medical Times*, July 13, 1850. A young lady, aged 20, of slight frame, but in the enjoyment of very good health, consulted Mr. Stanley for a painful swelling of the right foot and ankle. Five years previously, she had been greatly fatigued by a walk of extreme length, and she arrived home much exhausted, but was sufficiently recovered in a few days to go about as usual. From that time, however, the right foot and ankle were weak and painful, and swelled upon her taking the least exertion. About two years ago the swelling became permanent, and the ankle, which was easy when at rest, was so painful when she attempted to walk, that she was obliged permanently to keep the horizontal posture. Every variety of treatment had been adopted without avail; the swelling about the joint increased until the integuments gave way, and there formed an ulcer, whence flowed a thin sero-purulent fluid. There was a large swelling between the tendo Achillis and the os calcis, extending down to the

sole of the foot; part of the swelling was firm, part was elastic, as if containing fluid; the integuments covering it were thinned and livid, and had given way in one spot, exposing a fungous-looking mass of granulations: the movement in the joint was perfect. The limb was removed, and the morbid change was found to be limited to the synovial thecæ, which surround and accompany the tendons of the tibialis posticus and the flexor communus digitorum muscles to the sole of the foot. It was therefore strictly circumscribed and surrounded by healthy structures. The thecæ were thickened: their usual bright synovial surface was converted into a dull, uneven velvety structure, from which was produced a soft growth composed of cystoblasts, and a small quantity of delicate fibrous tissue. This growth made its way upwards between the posterior surface of the tibia and the tendo Achillis, and downwards into the sole of the foot, between the flexor brevis digitorum and the flexor accessorius muscles, both of which were quite healthy. The flexor tendons were unaltered in structure, but were surrounded by the soft growths above described, and by a large quantity of morbid synovial secretion, which seemed to be contained in more cavities than one; for behind the malleoli it was of pale straw colour, and somewhat stringy, whilst in the sole of the foot it was of watery consistence, of red colour from admixture of blood, and contained coagula.

I cannot conclude this paper without strongly recommending those who desire further information on the subject to consult the thesis of M. Michon,[1] to which I am indebted for many of the preceding details.

ON THE INTRODUCTION OF SOLUTIONS OF LEAD INTO THE BLADDER, FOR THE DECOMPOSITION OF PHOSPHATIC CALCULI.

By S. ELLIOTT HOSKINS, M.D., F.R.S.

In a paper which the Royal Society did me the honour of publishing,[2] some account was given of the decomposition of Phosphatic Calculi, by solutions of certain salts of lead, so dilute as to admit of their retention by the living bladder, without irritation or inconvenience.

The adaptation of the principle of double decomposition to the disintegration of vesical calculus, is in strict accordance with chemical usage: it supplies a class of agents, more energetic as regards the concretion, and less injurious to the organ in which it is contained, than any of the uncombined solvents hitherto employed. The *solvent*, no matter how dilute, can only be tolerated for a minute or two at

[1] Des Tumeurs Synoviales de la Partie Inférieure de l'Avant-Bras, de la Face Palmaire du Poignet et de la Main. Thèse présentée au concours pour une Chaire de Clinique Chirurgicale. Par L. M. Michon. Paris: 1851.

[2] Philosophical Transactions, Part I, 1843.

farthest, and cannot soon be repeated: the *decomponent*, on the contrary, is retained from ten to fifty minutes without discomfort, and may be repeated daily, or oftener if necessary. The cause of this difference is sufficiently obvious: the active agent of the decomponent is liberated gradually, and neutralised by the earthy bases of the calculus, before it can come in contact with the living tissues; whereas the former class of fluids causes such immediate irritation, that their ejection is required before any impression can be made on the concretion. The *base* of the decomponent unites with the *acid* of the calculus, while the acids of the former combine, and form soluble salts, with the bases of the latter. The combined acids are set free in definite proportions, neutralised in their nascent state, and removed from the sphere of action before any stimulating effect can be exerted on the bladder.

The cases which I am about to bring forward, although sufficient to prove the unirritating effect of these decomponents, when thrown into the bladder, are by no means calculated to test the amount of their action on the very concretions which they decompose so energetically out of it. It is not, however, because I cannot cite a host of triumphant cases establishing both points, that the observations I have been enabled to make, as to the mild character of the solutions, ought to be withheld.

Case I. Mr. F., aged 72, a patient of Mr. Coulson, was affected with palsy of the bladder; the urine was occasionally alkaline, and charged with phosphatic deposit. He suffered much from the accumulation of ropy mucus; it often prevented the urine from flowing through the catheter, without the introduction of which the bladder was never evacuated. The instrument, when passing through the prostatal portion of the urethra, was felt to grate over a considerable extent of calcareous matter impacted in the gland. He had experienced mitigation of symptoms, as regarded the mucus, from the injection of very dilute nitric acid; but in consequence of the irritation it occasioned, he could not bear its repetition a third time. Nevertheless, a solution of lead was, from the first, retained for twenty minutes; it produced a soothing effect at the time, and was not followed by the slightest annoyance. It was continued daily, or every second day, for six weeks, and often retained for half an hour. On rejection the fluid appeared milky, contained flakes of coagulated mucus, and yielded a considerable precipitate of phosphate of lead. The eyes of the catheter often contained gritty particles enveloped in mucus, which yielded a sensation similar to that produced by rubbing the pineal gland between the fingers. At the end of the above-mentioned period, no grating sensation could be felt on passing the catheter; the injection was therefore discontinued for some months, but again resumed, in consequence of a recurrence of this sensation, and of the mucoid secretion. After being persevered in for some time, it was again left off, relief having been obtained.

Case II. This gentleman was a patient of Mr. Guthrie. His general health had been very much impaired by long-continued suffering. Two calculi had been originally present in the bladder. One had been crushed, and the greater part of it removed; but the fragment retained was the cause of much uneasiness, especially when it rested

on the neck of the bladder. The urine was alkaline and bloody, containing mucus, and apparently pus. A stricture also existed in the urethra. The bladder was very irritable, but bore the presence of the lead solution for twenty minutes, with no more inconvenience than that which resulted from the introduction of pure water. The injection was continued every second day for nearly a fortnight. Particles of calculus frequently came away some hours after its use; they consisted of oxalate of lime, cemented together by triple phosphate. The latter was rapidly acted upon by the lead solution. The patient died soon after. Both his kidneys were found to be diseased, containing pus; the right enclosed four calculi. One stone was found in the bladder, besides that which had been broken up by Mr. Guthrie. A very small portion of the latter remained.

Case III. This was a patient of Mr. Key and Mr. Hunter. His bladder contained a large triple phosphate calculus. He had been lithotritised by another surgeon, unsuccessfully. The operation had caused much pain, and subsequent irritation, which had been soothed by injections of opium and warm water thrown into the bladder. The urine was neutral and turbid, containing blood and mucus. He occasionally passed calculi, of the size of small orange pips, which were readily decomposable by the lead solution. This fluid, when injected, was retained by the bladder without inconvenience, the first time for ten minutes, the second for half an hour, the third, fourth, and fifth, for fifty minutes. The rejected fluid deposited considerable quantities of precipitate on the filter. On one occasion it amounted, when dried, to eighteen grains of phosphate of lead.[1] Owing to some prejudice on the part of the patient, the injection was discontinued after the first week. This was unfortunate, as the case appeared to be favourable for testing the value of this mode of treatment.

Case IV. This was a patient of Mr. Copeland, aged 78, who had laboured for some time under vesical calculus, but on whom it was not expedient to operate. He used the solution for three weeks before his death. It was productive of a soothing effect on the bladder; and, whenever it was used, the ensuing evacuation of urine deposited a number of small crystals, but at no other time were they passed. After death, two large calculi were found in the bladder, and a smaller one sheltered behind an enlarged prostate. The surface of the concretions was studded with crystals, of the same description as those which had been brought away during life by the injection.

Case V. A retired army surgeon, aged 72, had been lithotritised seven years before, after which he had passed many fragments of uric acid calculus, with phosphatic coating. The prostate was enlarged, and the constant use of the catheter required. He tried the solution of lead twice or thrice a day for about a fortnight; but, although the bladder was irritable, the liquid, as he stated to me, caused "no pain whatever; on the contrary, it acted as a sedative to the lining membrane". He had, however, made up his mind to lithotomy, which was performed by Mr. Keate, and a stone, composed of fusible matter, urate of ammonia, and oxalate of lime, removed. On immersing frag-

[1] For this quantity of phosphate of lead, the equivalent is twelve grains of ammonio-magnesian phosphate.

ments of this calculus in the solvent, he found that, "after a few hours, they had diminished one half in bulk and weight; the exterior coating being eaten away, and the nucleus appearing a very different substance, much darker and harder". About three months after the operation, he again felt uneasy sensations, as though another fragment existed. He continued the use of the lead injection, which he found very soothing.

Case vi. Another patient of Mr. Coulson had long been suffering from affection of the urinary organs. He occasionally passed particles of calculous matter, but no stone could be detected in the bladder. This organ was paralysed, and required the constant introduction of the catheter for its evacuation. This gentleman was subject also to severe spasms, from the retention of a morbid secretion of vesical mucus, which, on being voided, was found to contain particles of phosphate of lime. He derived "much comfort" from the injection of the lead solution, and found that it lessened the secretion of mucus, facilitated its expulsion, and thereby lessened the frequency of painful calls to evacuate the bladder. There appeared to be also a greater disposition to expel the urine by natural efforts.

Other cases could be adduced, but the foregoing are sufficient to prove, not only that the bladder, under irritation, tolerates the presence of these solutions of lead, but also that they act as sedatives, and exert a favourable influence, directly and indirectly, on the morbid secretion of mucus which exists in cases of this nature.

After having made trial of most of the vegetable supersalts of lead, all of which act, more or less, as unirritating decomponents, I have returned to the use of that originally proposed, the nitro-saccharate,[1] as by far the most effective. That prepared for me by Mr. Garden, of Oxford-street, is much more energetic as a chemical agent than my own, and equally mild in its physiological effects. It is likewise more decidedly an organic salt, which I consider essential to the fulfilment of the ends in view; and I am strengthened in the opinion that sugar is a necessary ingredient, from the perusal of two papers in the July number of the *Pharmaceutical Journal;* one by M. E. Peligot, On the Combinations of Sugar with Lime, and another by M. Barreswill, On the Solution of Carbonate of Lime in the Saccharates.

One grain of the salt, superacidulated with five drops of strong acetic acid, is the proper proportion for admixture with each fluid ounce of water.[2] It is essential that the salt and the acid should be incorporated before the addition of the water, and that the whole should be brought to the boiling point. Superacidulation is necessary on many accounts; it secures perfect solution, increases the decomposing activity of the liquid, and prevents the formation of any carbonate of lead.

As the salts contained in the urine tend to decompose the solution, and lessen its effects on the concretion, the bladder should be eva-

[1] Philosophical Transactions, 1843, p. 11.

[2] The decomposing power of these solutions is in *inverse ratio* to their concentration; for instance, a saturated solution of the acetate, superacidulated pretty freely, is inert; whereas, in the above proportions, decomposition of phosphatic calculi takes place rapidly.

cuated, and washed out with tepid water before the lead fluid is introduced. A double-current caoutchouc catheter is the best for this purpose, as it enables a continuous stream to be employed; and as, on account of its flexibility, it is less liable to irritate the urethra, which should be sedulously avoided. From four to eight fluid ounces of the solution may be thrown into the bladder at a time, and renewed every ten or fifteen minutes, as often as may be deemed proper. By renewing the liquid at short intervals, much greater effect on the calculus is ensured, than when it is allowed to remain longer; for the precipitate formed by decomposition soon envelops the stone, and puts a stop to further action, until a fresh surface is exposed. Exercise during the retention of the injection increases its effect. Some slight revulsion may be produced by the first introduction of this, or any other fluid, into the bladder; when such is the case, the operation should be remitted for a day or two, and cautiously renewed. The injection may be either warm or cold, as may be most agreeable to the sensations of the patient. Warmth favours the decomposition of the calculus.

If used with proper precautions, I have found that the lead solutions exert as sedative and salutary an influence on the lining membrane of the bladder, as they do on external surfaces under inflammation. They also act upon the mucus, which is so abundantly formed in cases of this nature, coagulating it into short curdy flakes, which are easily passed through the urethra.

When the urethra itself is inflamed, or abraded, the injection will be injurious; for the lining membrane of the canal is, I believe, more sensitive than that of the bladder. The introduction therefore of decomponents should be had recourse to, either before lithotrity, or after the urethra has recovered from the effects of the instruments employed, but can never be used, with any prospect of success, where organic disease of the bladder or prostate exists. The injection should not be employed during the internal exhibition of hydrochloric acid, although it may be freely used when nitric acid is administered. When the bladder is not very irritable, a dilute nitric acid injection, alternating with the lead solution, will hasten decomposition.

The two facts established with respect to the lead salts, viz., first, their toleration by the bladder, and, secondly, their chemical action on calculous concretions, induce me to hope that they may become useful agents in the treatment of various other affections of the urinary organs. I have never presumed to imagine they would prove specific solvents for the stone; but, I trust that, where surgical operation is inadmissible, they will be of some avail for relief, if not for cure, by smoothing asperities, and removing the outward phosphatic coating of calculi, so as to bring them within the verge of the crushing forceps; in short, that they may avail for partial, if not for entire disintegration. The latter is more likely to happen where layers, composed of the urates or oxalates, are bound together by phosphatic cement. On this species of calculus, they are calculated to act as highly carbonated waters do on those of another description.

"Nor is the action of highly carbonated waters", says Dr. Prout, "confined to their mere solvent effects; they undoubtedly possess disintegrating power; that is, the power of disturbing the attraction,

both cohesive and adhesive, by which the molecules of the calculi are held together, so as to render them brittle and easily broken into fragments". This is an additional reason for using decomponents before recourse is had to lithotrity.

Besides the kind of cases already adduced, there is one variety for which decomponents seem to be peculiarly adapted; viz., concretions in the prostate gland. No instrument hitherto devised has been successful in dislodging them. The first case, however, mentioned in the present paper, goes to prove that a considerable quantity of calcareous matter was removed from the prostatal portion of the urethra, by the use of the lead injection.

In the first experiment communicated to the Royal Society, it was stated, that one hundred grains of calculus immersed in lead solution for forty minutes, had lost twelve grains. In the second experiment, the quantity dissolved, from a fragment weighing thirty-seven grains, was, after half an hour's immersion, eight grains. Subsequent experience has verified these observations, and proves that, under favourable circumstances, decomposition takes place in definite proportions; so that, from the precipitate of phosphate of lead, the quantity of ammonio-magnesian phosphate which has been decomposed may be securely estimated.

Since these circumstances obtain out of the bladder, by means of a fluid which can be borne by that organ with impunity, we may reasonably hope, that the mere transference of the scene of action, from the exterior to the interior, will not materially affect the results.

The foregoing communication contains the substance of a paper read before the Royal Medical and Chirurgical Society, the debate[1] on which was founded chiefly on a solitary case, confessedly one of the most unfavourable that could have been selected; one in which "nothing could be injected into the bladder without producing great irritation." The consequence was a natural disinclination to give the lead solution further trial. This paper not being deemed worthy of publication, and the Philosophical Transactions not being read extensively by medical men, the subject has not hitherto been before the profession. Its present publication arises from fortuitous circumstances, and a conviction that there are certain conditions in which the means recommended are likely to be beneficial, rather than from any desire to assume peculiar merit, or from motives of personal interest. I am as far removed by local position, if by nothing more, from the influence of the one, as I am indifferent to the other.

Having ascertained that a certain solution, mild enough to be tolerated by the human bladder,[2] exerts much chemical influence on phosphatic calculi, I am desirous of engaging the attention of those among my professional brethren, whose abilities and opportunities may enable them to pursue the investigation more thoroughly than I can.

Guernsey, Sept. 3, 1851.

[1] Reported in the *Lancet*, June 22, 1844.

[2] My own eye was the first test of its mildness.

CASE OF DIFFUSE PULMONARY APOPLEXY, WITH RUPTURE OF THE PLEURA, AND HÆMATHORAX.

By STANHOPE TEMPLEMAN SPEER, M.D.Edin., etc.

Case. W. B., an individual in reduced circumstances, 62 years of age, had for some time been in a weak state of health, when he was suddenly attacked, in the month of February 1851, with most alarming orthopnœa, extreme distress, lividity of countenance, together with symptoms resembling a fit of congestive asthma. These in a great measure subsided, and when seen by me, on the third day after the attack, the following was his condition. There was still considerable dyspnœa, unaccompanied by pain, but by a sense of weight, heat, and constriction in the chest; there was cough, with very scanty viscid mucous expectoration, untinged by blood; the respirations were twenty-eight in the minute: the pulse was small and irregular. A physical examination gave evidence of a certain relative amount of dulness over both lower lobes, as compared with the upper ones; while, in these especially, there were heard some distant bronchial râles, principally of the dry kind. The expiration was considerably increased, both in length and loudness, while the inspiration was comparatively feeble, both murmurs having a rough, harsh character; these signs were the same on both sides, and were more marked in front than behind. The attack lasted a fortnight, and gradually subsided, without any change in the character of the râles, and with but little in that of the expectoration. No signs of solidification of the lung could be detected; and the case throughout manifested a remarkable want of coincidence between the extreme severity of the symptoms, and the comparative want of confirmation derived from the physical signs.

It is, however, worthy of remark, that the heart's dulness on percussion was totally unappreciable; and that the respiratory murmur was heard over the entire space usually occupied by the uncovered portion of that organ. Its impulse was imperceptible; and its sounds, which could scarcely be detected, but by making the patient hold his breath for a few seconds (a process which could only be adopted towards the latter end of the attack) shewed that irregularity of action existed; this was confirmed by the character of the pulse, which (as before said) was small, feeble, and irregular from first to last. No murmur accompanied either sound.

Although the cardiac symptoms, with the exception of the irregular action, were of a negative character, I entertained a suspicion that the sudden attack of orthopnœa, with the symptoms of pulmonary congestion, were in some measure dependent upon the condition of the central organ of the circulation, which probably was softened or attenuated.

The patient recovered slowly from the immediate effects of the attack, and had resumed his usual occupations (never indeed of a laborious nature), when, on the 16th of May, about three months from the previous seizure, while slowly walking across a yard, he suddenly stopped, threw up about a couple of quarts of dark blood, and expired before medical assistance could be of any avail.

Necropsy twenty-four hours after Death. On opening the thorax, the lungs did not collapse; they appeared to be of great size, filling the whole of the cavity, which seemed scarcely able to contain them. The heart was completely hidden. And the whole surface of both lungs was of the deepest red colour; the right one, when removed, presented a perfect specimen of uncircumscribed pulmonary apoplexy, its entire substance being gorged with very dark coloured blood, which, upon making incisions into the lung, flowed out freely from every part. The substance of the organ was soft and pulpy, as if it had been soaked in blood; while its structures seemed completely obliterated, so great had been the effusion into them. The left lung presented the same appearances, if possible in a still higher degree; in its lower lobe, and at its posterior aspect, the pulmonary tissue was found completely broken down into a soft friable pulpy mass. Corresponding to this portion, was found a rent in the pleura, two inches in length, through which upwards of a quart of blood had escaped into its cavity.

To account for this rare occurrence, no traces of disease of the lungs besides those mentioned could be detected. The bronchial mucous membrane was pale; and, although the tubes contained fluid blood, there were no other morbid appearances connected with them. At the right upper lobe, there were traces of sub-pleural emphysema. The large vessels were all carefully examined, but no aneurism or rupture of any kind could be detected. The aorta itself was quite healthy, but of rather small calibre, as compared with the volume of the pulmonary artery.

The heart was found driven deeply backwards into the mediastinum, by the pressure of the distended lungs. Its valves were all perfectly sound and competent. The muscular substance, however, afforded proofs of disorganisation; it was of a pale yellow colour externally, and for about one-third of the thickness of its wall, when incised. When handled, it was found to alter its shape with great facility, and could be moulded and kneaded in the hands like dough. The walls of the ventricles were soft, flaccid, easily ruptured, and afforded an example of that condition designated as yellow softening of the heart. No superfluous fat was found around it, and its cavities were rather larger than usual.

Remarks. The case just narrated, is undoubtedly one of very rare occurrence; and but few similar ones are to be found on record. One is related by Corvisart, in his translation of Avenbrugger; the second by Hohnbaum, as mentioned in Dr. Forbes's translation of Laennec; another is to be found in the *Clinique Médicale* of Andral; and a fourth is given by Dr. Fergusson, in the first volume of the *Dublin Medical Transactions*. Others doubtless exist, but to the particulars of these alone have I had access; and I find that each observer has remarked the rarity of the occurrence. The four cases just alluded to, all agree with the one narrated above, as regards the appearances found after death. In each, the whole or a portion of the lung was the seat of uncircumscribed pulmonary apoplexy, with breaking down of the lung, laceration of the pleura, and escape of blood into its cavity. During life, moreover, the symptoms were strikingly similar; a sudden shock,

succeeded by a rapidly fatal termination, being the leading features of each case. The principal difference being the absence of external hæmorrhage in two of them.

It is worthy of remark, that in none of the instances were there to be found those cardiac lesions which are so commonly supposed to accompany the circumscribed variety of pulmonary apoplexy; and, in the absence of these, it becomes an interesting inquiry, as to the cause of this condition in the cases which have just been quoted, as well as in the one which forms the subject of this article.

Since the year 1816, when this affection was first noticed, three hypotheses have been hazarded as explanatory of these sudden and copious effusions of blood into the tissues of the lung and pleural cavity; namely, *a*. Paralysis of the Pulmonary Plexus of Nerves; *b*. Diminished Coagulability of the Blood; *c*. Dilatation of that Fluid itself.

Paralysis of the Pulmonary Plexus was advocated by Lorinser, and other pathologists of the German school; and was supposed to act by producing a comparative over-action of the vessels of the lung (*Vide* Forbes' Laennec). The theory in itself does not appear to have undergone much investigation; but it not improbably has some foundation, inasmuch as the occurrence of sudden attacks of local paralysis in other parts is well established. Too little, however, is known on this subject, as applied to the cases in question, to say anything very definite regarding it.

Diminished Coagulability of the Blood. We have reasonable grounds for attributing many instances of passive hæmorrhage into the substance of the lungs, to such a condition of the circulating fluid; and the existence of extravasated blood in the lungs of those dying of purpura, is an argument in favour of the diminished coagulability of the blood being occasionally a predisposing cause of the diffuse form of pulmonary apoplexy. But in cases like the present, such a condition alone can scarcely be supposed adequate to the production of such results. Extravasations of blood, the simple result of diminished coagulability, are invariably of a passive nature; they have all the appearance of gradual formation, and are for the most part accompanied by certain other indications of a purpurous or hæmorrhagic diathesis; or, if that be not the case, they are found after death to have existed in conjunction with advanced cardiac disease, which, in such cases, had by its long continuance so deteriorated the quality of the blood, as to render its escape from the pulmonary capillaries, and its gradual infiltration into the parenchyma, a condition very analogous to the true purpurous extravasation.

Dilatation of the Blood. The morbid appearances found in three cases of severe apoplexy of the lung, occurring suddenly, and with such severity as to merit the term "apoplexie foudroyante" of the French writers, would then appear to suggest the existence of some sudden change, acting either immediately upon the mass itself of the circulating fluid, or through the intervention of its nerves:—consisting either in the withdrawal of a certain pre-existing influence, as in the pulmonary paralysis of the Germans previously mentioned; or in the accession of a new and unaccustomed influence, of which but little notice has ever been taken, but which Laennec considered it

necessary to admit in certain cases of sudden, profuse, and otherwise unaccountable hæmorrhage; namely, dilatation of the blood itself.

Now, without venturing to affirm that such a phenomenon does actually take place, I cannot avoid entertaining the idea, that in a fluid of so complex a nature, possessing such essentially vital qualities, and undergoing such changes as does the blood, whether in health or disease, modifications of bulk, independent of additional material, may, under favouring circumstances, really take place; while, on the other hand, a similar condition may equally be the result of an addition to one or other of the elements of the blood, more especially to the globules. The existence of local plethora is not of unfrequent occurrence; and the great increase in the amount of the globules has been proved to be its characteristic peculiarity; but whether the active distension of the blood-vessels, which exists under these circumstances, be owing simply to the mechanical influence of the augmented globules, or to an increased vital activity in those processes reciprocally existing between them and the more fluid portions of the blood, is not certain. What we know is, that an increase in the number of one of its most important ingredients (the globules) is the distinguishing mark of plethora. Something is in excess; and that excess is equally proved to be a predisposing cause of one form of hæmorrhage. If, therefore, it is in this sense of the word that we are to understand dilatation of the blood (with its similar process to give rise to such effusions) the term does not appear to be so misapplied as we might at first sight suppose.

If, however, we are to understand by dilatation of the blood, a vital change in that fluid, by which (without any extraneous addition being made to its bulk) it occupies or requires a larger containing space than before, we are thrown upon pure hypothesis. Yet, as before stated, the fact does not appear absolutely impossible; for, to quote the words of Dr. Wood of Philadelphia, "The blood may become diseased by a change in the character, as well as in the relative quantity of its constituents, and this independently of the entrance into it of any foreign principle. In what way such changes are effected is not precisely understood. There are not wanting facts to show that they may be produced by the action of the nerves. If, under perverted nervous influence, the products of secretion performed in the capillaries may become unhealthy, as is generally believed, there can be no difficulty in admitting that the blood itself, in these capillaries, may undergo alterations from a similar cause. If nervous action be, as some suppose, analogous to the galvanic, we can readily understand that it may be capable of modifying the condition of the vital fluid submitted to it, in the extreme vessels, as water is decomposed when placed between the poles of a galvanic battery. We may conceive, also, that the constituents of the blood may be modified by the varying condition within the body of those subtle principles, which exercise so powerful a chemical agency without it—namely, heat, light, electricity."

If, therefore, such a condition of the blood does occasionally take place, as its actual dilatation, its cause should, I conceive, be sought for, and connected with, certain modifications of atmospheric and electrical influence. The effects of these upon homogeneous fluids are by no means trifling; but upon a fluid such as the blood, they must, in all

probability, be considerable; and in relation to temperature, the idea would appear to be borne out by the prevalence of those states of the body, characterised by plethora and increased vitality of the blood, during the first accessions of summer heats. This is indeed a fact so generally believed, that few countries are to be found, the inhabitants of which are not in the habit, at this time of the year, of taking measures for diminishing the mass of the blood, whether by baths, venesection, purgatives, vegetable diet, etc.; hence, again, the custom of many of our ancestors of undergoing a precautionary loss of blood in the spring. I have moreover remarked that, as a general rule, the most severe and numerous cases of hæmorrhage occur at the commencement of the first summer heats. Of ten very severe cases, which I have seen since last October, all occurred within a space of two months, from the middle of April to the middle of June; and my own experience has led me to notice a preponderance of such cases every year at the same period.

With regard to the influence of electricity upon the blood, much also may be surmised, if little be actually known. It is well known, that bodies in a similar electric condition have the power of repelling one another; and it has been supposed that the circulation is aided by the electric state of the blood. In his valuable little work on *Electricity and Galvanism*, Dr. Golding Bird says: "That if a vessel containing water, having a very small hole in its base, be connected with the prime conductor of an electric machine, the water will merely escape by guttation; but on setting the machine in action, the particles of water becoming similarly electrified, repel each other, and the fluid escapes in a continuous stream. In accordance with this fact, it was long ago shown, that if a patient have a vein opened in the arm, and the blood happens to escape but sparingly, on placing him on a glass stool and electrifying him, the blood will, like the water in the vessel just alluded to, escape *pleno rivo*." Holding this fact in view, and remembering the difficulties that have always been experienced in explaining the capillary circulation, we may possibly have another clue to those perturbed conditions of this circulation (independent of any change in the functions of the central organ), which so frequently occur at a season of the year, when undoubtedly great electric changes are going on in the atmosphere; but here again we are forced upon a supposition as to the *modus operandi* of this agent on the circulation. It is possible to conceive, that the particles of the blood being highly charged with electricity would tend to repel each other; but this in itself would not contribute to produce onward movement in the whole bulk of the fluid. It would certainly cause a separation of the particles one from another, but this might take place in one direction with as much facility as in another, and thus no assistance of an impulsive character would be derived from it. But the blood being subjected to a considerable amount of *vis a tergo*, the repellent action can only act in one direction, since those particles which might otherwise tend to retrograde, are entirely prevented from doing so by the bulk of the fluid behind them, urged onwards by the motor power of the heart. In this way we may conceive, that the electrical repulsion of one set of particles is exercised upon another, which, from mechanical causes, is unable itself to develope this property; and hence the repellent power

becomes merged in one continuous onward wave, the first impetus to which is given by the heart, and is then maintained by the electrified particles shunning one another; and as they can only do so by moving in one direction, a continuous circulation is thus kept up. It is needless to add, that the above can only be considered in the light of an hypothesis, and as such, may be taken for as much as it is worth.

In two cases of pulmonary apoplexy related by Hohnbaum, the appearance of the lungs, and the symptoms, both prior to, and at the moment of the fatal event, both pointed to the existence of a condition of the blood, very different from that which would indicate diminished coagulability alone as the cause. In these instances, the individuals had both suffered from symptoms of plethora; they had both lived in a manner capable of inducing and keeping up such a condition; and, in both, there was evidence of derangement in the pulmonary circulation, as evinced by dyspnœa, contraction of the chest, and paroxysms of asthma. When examined after death, the lungs, in both instances, appeared too large for the cavity of the thorax, so dilated and gorged were they with the immense accumulation of blood in their tissues, while in neither case, was there any disease of the heart or other organ found, to explain the morbid appearances; and whether these are to be attributed to some modification of the blood itself, or to a sudden palsy of the pulmonary nerves, (as suggested by the narrators), must necessarily be a matter of uncertainty; probably the two causes may have acted simultaneously.

The following case, although not of a fatal nature, presented certain symptoms so identical with those which preceded death in those previously mentioned, as to merit a slight outline. A gentleman, of middle age, and in perfect health, while occupied in his bed-room, suddenly experienced a pain in the chest, and fell senseless on the floor; he remained in this condition for nearly twenty minutes, and when consciousness returned, he found himself free from headache or any other cerebral symptom, but his breathing was short, he had dull pain in the left side, a small, quick, thready pulse, great anxiety and uneasiness, and altogether he presented a very unpromising appearance, especially in relation to the thoracic symptoms; these, nevertheless, both in their invasion and in their combination, were of so anomalous a character, that it appeared difficult to refer them to any of the more ordinary diseases of that cavity. A physical examination was not much more satisfactory; the left upper lobe, both before and behind, was the seat of rough and diffuse bronchial breathing, with an obscure sound of crepitation, which did not resemble the ordinary moist sounds usually heard in the tubes or air-cells. There was also slight comparative dulness over the same part; the right lung presented nothing abnormal, and the heart appeared perfectly healthy. These signs underwent no alteration of character, but gradually subsided, still, however, preserving their somewhat anomalous character; inasmuch as, neither from their own evidence, nor from that of the symptoms, could the ordinary phlegmasia of the lung be diagnosed; while, on the other hand, there was enough to show that the affection was not a purely nervous one. The mode of invasion, (which I learnt fully some days after first seeing the patient), precluded the idea of previous chronic disease, besides which, his health had been perfectly sound for a length of time.

Coupling therefore these circumstances with the sudden shock, the sensations in the chest, the anxiety, small rapid pulse, but absence of true febrile symptoms, and the physical signs, I surmised the existence of a latent pulmonary apoplexy, depending (as I cannot forbear imagining) upon one or other of the causes just alluded to. Had there been any visible hæmorrhage, I should have felt certain as to the nature of the attack; but it is well known that this is not a necessary accompaniment of pulmonary apoplexy.

I may add, that this individual recovered perfectly, and subsequent examinations served only to confirm belief in the gradual absorption of blood extravasated into the intervesicular structure of the lungs. Had this case proved suddenly fatal before the return of consciousness, it would have been attributed to a cerebral affection in all probability; and it is not unlikely, as Dr. Forbes remarks, that this error may have frequently been committed under similar circumstances.

With regard to the case which has formed the subject of these remarks, it would appear a matter of equal difficulty, to explain satisfactorily the sudden occurrence of so extremely severe an attack of pulmonary apoplexy. Reasons, however, might be adduced for attributing it, in part, to each of the conditions suggested as capable of producing it. The sudden shock might be owing to the supervention of the pulmonary paralysis of the authors previously mentioned. The appearance of the lungs on dissection, gorged and distended with dark blood, might suggest the probability of an increase in the bulk of the fluid; while the apparent absence of coagulability, the manner in which the blood flowed from every incision, together with the character of that which was found in the pleura, might lead to the supposition that diminished coagulability had likewise a share in the phenomena observed upon dissection; more especially when taken in connexion with the fact, that the individual had been in early life, and, indeed, up to within a few years of his death, in easy circumstances, but that during this latter period, the change in his mode of living, his diet, etc., had been of a very inferior description, and perfectly sufficient to account for any impoverished condition the blood might have undergone. His cachectic appearance, moreover, tended to countenance such an opinion.

The softened condition of the heart may have had a passive share in the production of the hæmorrhage and its consequences. It has been found to exist, independent of any inflammatory process, in cachectic persons; and what is more to the point, has been shown by Dr. Hope to be very influential in the production of pulmonary apoplexy. In three cases of softening, detailed in the last edition of his *Treatise on Diseases of the Heart*, two gave evidence of most extensive apoplectic effusion; and he alludes, in addition, to several other cases of the same kind. The principles upon which he states this lesion to act are the following. The left ventricle, weakened and generally attenuated in its parietes, becomes unable to expel its contents; an obstacle is thus offered to the entrance of blood from the left auricle, and this at once produces an obstruction to the free disgorgement of the pulmonary veins, and a consecutive retardation of the whole pulmonary circulation. If, then, we admit that in the case narrated above, a similar condition of the lungs existed habitually, in connexion with a softened heart, it is no longer difficult to believe that a sudden change, whether in the bulk

of the fluid itself, or in the nervous influence regulating its distribution, might cause a general exhalation of blood into the various tissues of the lungs, more especially if (as is not improbable) a previous tendency to diminished coagulability had rendered its extravasation comparatively easy.

In intimate connexion with this subject of the dilatation of the blood, I may mention that, since the preceding remarks were written, I have had my attention directed to the fourth chapter of Dr. Cormack's *Prize Thesis on Air in the Organs of Circulation* (Edin. 1837), entitled "Remarks upon the Generation of Air in the Living Body, especially in the Blood-Vessels; with observations on the consequences which may result from its presence there". He shows that "there are various facts and arguments, which render it exceedingly probable that, owing to the sudden formation of air within the blood-vessels, death may be produced either by arresting the contractions of the right side of the heart, or by producing a fatal action on the brain."

Cheltenham, August 29, 1851.

ON SOME DIFFICULTIES IN THE STUDY OF HYSTERIA.

By SETH B. WATSON, M.D., formerly Physician to the Ratcliffe Infirmary, Oxford.

The Benevolent Power presiding over universal nature, has determined that, for the most part, diseases dangerous to animal life should quickly attain a crisis, in the recovery or death of the sufferer. Of such diseases, whatever may be the theory of their treatment, the course is apparently settled, the reasoning upon them clear and simple, and the result, from its rapidity, in some measure satisfactory to the spectator. But there is another class, whose continued presence is quite compatible with animal being; and of these, as it is their property to remain without full destruction to the organs they disturb, so is their progress unsatisfactory, and the means taken for their removal uncertain, conjectural, and obscure. In these, the physician provides himself from all sources, and from his personal experience (contracted as far as possible to obtain concentration), with certain types, or ideals of diseased states, from which he insensibly selects one, towards which the case before him appears most to approximate; for, in reality, he must rest satisfied with such an approach to truth, as an escape from the extremes of useless scepticism, and blind credulity. Hysteria may be placed among this class, as one of the most difficult; so much so, that a perfect treatise on hysteria would comprehend within itself the primal foundations on which the structure of medicine, as an art, must finally be raised. I say as an art, in opposition to its popular development as a practice, each requiring a different constitution of mind; to the perfection of the former, self-distrust being as conducive, as self-confidence is necessary to the latter. The modes and processes of the human intellect are not favourable to the exact study of this class of diseases. There is a tendency in our minds, by their levity and volatility, to overlook with ease all the many failures in dreams, charms, omens, and prophecies, but obstinately to remember the very few that are successful. Now the opposite state is required; we should have the capability of

recollecting, and a pleasure in dwelling with exactitude, on failures equally with successes. Nor can imposture cease, till the stimulus of praise or gain are unnecessary to an accurate remembrance.

Again, if in youth, by a too close attention to professional facts, those subjects on which the imagination, or an inferior faculty closely allied thereto, ought legitimately to be entertained, are totally shut out; if these professional discoveries too closely and too entirely occupy the student's mind, the imagination, deprived of its proper nutriment, is reverted on this state of practical life, and becoming thus diseased, and unguided by the beautiful, busies itself in working out and colouring medical cases, supplying, as the results of medicines and treatments, what exists only in a heated and disordered fancy. By the law of association, also, from constantly reading, and hearing that certain medicines produce certain symptoms in the progress of disease, we are accustomed in their use, with unshaken faith, to attach the cure to the remedy, destitute of the boldness to innovate, or of the irreverence which seems to be implied in doubting their efficacy. Our fears of words and names are too great, to allow us calmly to observe what would be the result of the total abstinence of our assistance. With us, coincidence and concurrence are allowed the weight of sequence. Even as students of the art of medicine, difficulties beset us, from which students in the other arts are free. For instance, in painting and sculpture, a habit of patient quietude, and concentration on single objects is encouraged, and a hurried walk round a gallery of pictures and sculpture would be considered confusing, rather than beneficial. In these arts, also, we consider the absence or presence of truth in the production, as the test of the degree of perfection in the artist. But man is naturally an animal believing in medicine; and nothing will wholly root out this instinctive proneness and declivity to believe, without proof, in the statements of cures. This is not more present, though more visibly so, in the medicine-men and charmers, than in the civilised and enlightened. It cannot be overlooked and contemned; for the painful fact must be acknowledged, that a love of such error is not accidental, but essential to our nature; and that in our progress toward medical truth, old open errors are too often exchanged for the newer and more recondite. Men, too, in their time of strength, and the even temperament of health, may neglect external forms; but, in their hour of weakness and depression, they cling to the visible and tangible—the form of something active, something being "done" for the patient, is called for by the superstition of the friends. To what other principle, than an instinctive knowledge of this working in minds under suspense, can be attributed the attempts to bleed drowned and crushed men, and others in a similar condition?

In the study and treatment of hysteria, we have all these difficulties to contend with; and these must excuse our want of permanent success. We can conceive hysteria to be a diseased mode of the will, which becomes inveterate from taking place in a disordered body, without its originating therein, or being wholly cured thereby. If it be considered a bodily disease alone, we should be forced to exclude the effects which a consciousness, or the being conscious of their corporeal existence, excites on the action of the nerves: for it will, I think, be granted, that there are few forms of hysteria, in which the

patient's attention is not fixed on some nervous receptacle, with too great a continuity and intenseness.

In some cases, hysteria appears to be the accumulation of unexhausted energies, of whatever kind; as if this spiritual or nervous accumulation became too great for its corporeal dwelling. When these energies find a proper vent, the hysteria disappears. Some impression made upon the heart or imagination, calling up a train of morbid sensations, continued without intermission, destroys the regular function of volition, and by over-exercise damages the bodily instrument of its operation.

It is curious to observe the mental character of the hysterical—the vacillating tone, and the halting between two opinions, which characterises the statement of their sufferings. Where there is actual disease, there is less delight in describing it; and the symptoms are comparatively clearly and succinctly related. With the complications of hysteria, the creations of fancy supersede the plain offspring of fact. A tendency to unsoundness in thought and expression, when only partial, and meeting with partial resistance in will, often takes the form of the hysteric paroxysm in those muscles over which the will predominates. Yet, when this resistance is wholly overcome, the tide of unconnected thought, feeling, and expression, sweeps on, and total incoherence is established.

A strong desire for the sympathy of those around, which is sometimes, unfortunately, to be obtained alone by the exhibition of the paroxysm, is one grand cause of its excitement. The attention of the hysterical is accidentally drawn to some other form of disease by proximity; and this in some gives rise to the artistic energy of imitation, without the wish to fraudulently simulate the disease. Women, with all their elegance and delicacy of perception, are not inventive, and rather work on what has been already presented, than originate even a new form of disease. Their want of self-consciousness, in many of their acts and feelings, has brought upon the hysterical the charge of active imposture; when, instead of this, they would be found defective in the power of placing their actions before their own eyes, and viewing them as the acts of strangers. The self-contemplating power of Hamlet and Macbeth, in opposition to the female characters of Shakspeare, will best explain this.

We cannot fail to observe that the hysteric paroxysm is restrained, and sometimes extinguished, in the moral atmosphere of women of clear understanding, as it is nourished by the weak sympathies of the reverse. With the same diet, air, exercise, and medicine, a patient will remain hysterical, with certain companions or attendants; and, under the same external circumstances, recover in the society of others; the want of attention to, and interest in, the exhibitions of the disease, being the only apparent difference. Old cases disappear under changes of scene, air, and passions, particularly the latter. Short walks, repeated at intervals, seem to break up and dissolve the morbid impressions, and gradually and insensibly increase the self-control, especially if these walks be taken in company with those of their own sex, of that temperament more likely to perceive the ludicrous than the tragic, in the common affairs of life.

16, Norfolk Street, Park Lane, September 1851.

BIBLIOGRAPHICAL RECORD.

Reasons for Embracing Homœopathy. By Charles Ransford, M.D.Edin., Fellow, and lately one of the Examiners, of the Royal College of Physicians of Edinburgh ; Physician to the York Homœopathic Dispensary. pp. 24. London : 1851.

Letter to Professor J. Y. Simpson, President of the Royal College of Physicians of Edinburgh, concerning the Resolutions recently passed by that body in reference to the Therapeutic Practice commonly called Homœopathy. By Wm. Macleod, M.D., Fellow of the Royal College of Physicians of Edinburgh, Physician to the Wharfedale Hydropathic Establishment, and to the Llhlen Hydropathic Hospital. pp. 45. London : 1851.

Letter to the Patrons of the University of Edinburgh on the late Resolutions of the Medical Faculty. By William Henderson, M.D., Fellow of the Royal College of Physicians, Professor of General Pathology in the University of Edinburgh. pp. 24. Edinburgh : 1851.

Drs. Ransford, Macleod and Henderson are a notorious triumvirate: they are Fellows of the Edinburgh College of Physicians, and practitioners of homœopathy! Two other gentlemen, Drs. Macdonald and Gregory, we believe, complete the list of fellows who have joined the quack alliance, which, in common parlance, is termed homœopathy. Dr. Macleod combines homœopathy with hydropathy ; Drs. Macdonald and Gregory are Mesmeric homœopaths ; and Dr. Henderson, Professor of General Pathology in the University, avowedly practises several *pathies*, though he sneers at modern Mesmerism, and maintains that his own apostasy is not so much the cause of the decline in the number of students attending the Medical School, as the "Mesmeric *soirées* of the Professor of Midwifery, and the *Letters to a Candid Inquirer* of the Professor of Chemistry".[1] The settlement of intestine quarrels we must leave to those who are better acquainted than we are with what Dr. Henderson calls "the history of the last session"; but we think it right to say, that Professor Simpson has satisfactorily repudiated Mesmerism. Our present object is to give a short account of the three pamphlets before us, and to call attention to the deplorable predicament in which the Royal College of Physicians of Edinburgh, and the Medical Faculty of the University, are now placed :—anxious to act with consistency and propriety, but hesitating to do what they feel to be both right in itself, and necessary for their own respectability.

Dr. Ransford gives us some scraps of his personal history, which, however, require amplification. The curiosity of the reader is excited, but not gratified ; we are told that the writer successively abandoned "ordinary practice" in Edinburgh and Alnwick, and that he is now trying his luck at homœopathy in York. We crave for further details. The propriety of entitling the pamphlet *Reasons for Embracing Homœopathy*, may in this way be fully vindicated : in its present unfinished state, it is a very lame attempt to defend and dignify the history of the author's migrations and doctrinal transformations. That Dr. Ransford is afflicted with a weak and illogical mind, a perusal of his pamphlet puts beyond doubt ; for it is a production which could only have been published as a statement of "reasons" by a man incapable of understanding a medical inquiry. But while we discover and proclaim his mental deficiencies, we are not inclined to excuse him on these grounds.

[1] Dr. Gregory's book was reviewed in our last number, p. 820.

He seems to have sighed for homœopathy, "even while holding office in the Royal College of Physicians of Edinburgh, as a determined opponent of homœopathy and its disciples". He thus describes the state of matters in relation to homœopathy, when he was a candidate for Edinburgh practice.

"The conscientious, highly educated, and accomplished follower of Hahnemann, whose only object was to substitute in therapeutics, certainty for uncertainty, order for confusion; this man, we repeat, was treated as a Pariah, an outcast. Homœopathy was always pronounced to be on the wane, nevertheless *we found to our cost that it took from us our best patients;* we fondly hoped that these misguided people would, after a little time, return to their former orthodox creed and practice; but no, they not only deserted us, our cathartics, sudorifics, alteratives, derivatives, blisterings, bleedings, *et illud genus omne*, but, charmed with the superiority of their new favourite, in the most unkind manner they persuaded others to follow their example." (p. 5.)

It is always a most severe trial of integrity to see quacks grow rich, while honest men suffer from a want, or general desertion of patients: the result of such defection, to physicians without private fortune, is poverty; and poverty is too often the parent of charlatanry, even among men who, in other circumstances, might have resisted its meretricious allurements. Hiffernan's ethics, though too often followed, cannot be defended. "Paul Hiffernan", says Washington Irving in his *Life of Goldsmith*, "was something of a physician, and elevated the emptiness of his purse into the dignity of a disease, which he termed *impecuniosity*, and against which he claimed a right to call for relief from the healthier purses of his friends." Now it strikes us forcibly, that if Paul Hiffernan had lived in the present day, he would have adopted homœopathy as a cure and a prophylactic for his disease; and that many in his plight, as well as in that described by Dr. Ransford, have adopted a similar course, it is impossible to deny. We wish to draw no offensive parallel between Dr. Hiffernan and Dr. Ransford; but we do mean to say plainly, that the extract which we have given from the latter's *Reasons for Embracing Homœopathy*, compels us to suspect that—perhaps unconsciously—Dr. Ransford's conversion was simply the consequence of a wish to be converted. He ardently desired for "reasons to embrace homœopathy", just as the love-lorn lassie of the Scottish song wished her sister "*to advise her* to marry Tam Glen", in preference to "the laird o' Drummeller". We hope the Doctor thought as little of pelf as did the damsel.

"There's Lowrie, the laird o' Drummeller,
'Gude day to ye, lass', he comes ben:
He brags and he blaws o' his siller,
But when will he dance like Tam Glen?
Come, counsel, dear tittie, don't tarry;
I'll gie you my bonnie black hen,
Gin ye will advise me to marry
The lad I lo'e dearly, Tam Glen."

Dr. Ransford's cases are detailed after the fashion of those which figure in the newspaper advertisements of Professor Holloway: they are calculated to mislead the public, but with the profession they can excite only contempt for the writer. Having made this remark, we think it right to quote the whole of the cases, with the comments upon them, contained in Dr. Ransford's pamphlet; and we shall be surprised if any of our readers can see in either, the shadow of an argument in favour of homœopathy or infinitesimal doses.

Let it be clearly understood, that we would not encumber our pages with Dr. Ransford's balderdash, were we not anxious to afford the profession a true picture of the calibre and morality of the man who writes himself "lately one of the Examiners of the Royal College of Physicians of Edinburgh". Is it surprising that a College which could appoint such an examiner, should be unsettled by medical scepticism and rampant quackery?

The quotation which follows is one continuous passage.

"His determination to test it was strengthened by attentively considering

the letter of his late ever to be lamented friend, Dr. Andrew Combe,[1] whose writings are so widely known and so justly appreciated in Europe and America. Dr. Combe had no cause to serve but that of truth. Truthfulness was his characteristic. The writer knew but too well, that so far as the uncertainty of medicine was concerned, he could scarcely be worse off; for professional intercourse (and this was considerable) with many eminent practitioners, had not tended to increase his confidence in drugs nor in medicine generally; nor did Dr. Forbes give him comfort, when he issued his celebrated number of the *British and Foreign Review*, containing the well known article entitled—'Homœopathy, Allopathy, and Young Physic'. In order to take his first step with every precaution, the writer acquainted his friend Dr. Russell of Edinburgh with his difficulties, and received from that gentleman every direction for the proper investigation of the homœopathic practice; he likewise went to Newcastle and introduced himself to Dr. Hayle, who received him with his wonted urbanity, and advised him, if he wished to be speedily convinced of the *power* and efficacy of homœopathic preparations, to select for trial *acute* cases of disease. He returned and commenced his investigations, carrying them on in such a manner, that with scarce an exception, his patients were ignorant of his proceedings, and did not suspect any deviation from ordinary practice, save that they were agreeably surprised to find themselves cured and relieved by medicines tasteless and colourless. The result of his first trials utterly confounded him. Acute inflammatory cases, of such a description, as are by consent of all authorities in medicine, ordered or recommended to be treated by bleeding, either general or local, and other debilitating measures, yielded much sooner to homœopathic remedies appropriate to each case. One of the earliest of these was the following instance of

"Bronchitis. Mr. P.'s infant, aged six months, residing two miles from Alnwick, was seized on the 26th of March, 1850, with cough and dyspnœa; attended with thirst, hot skin, and quick pulse. Domestic remedies, such as antimonials, castor oil, friction with Bow's liniment, had been resorted to; but as the symptoms increased in intensity, I was hurriedly sent for, early on the morning of the 29th, and found the infant lying exhausted in her mother's lap, suffering from cough, short, harsh, dry, and constant in its character; dyspnœa urgent, the nostrils dilating widely at each inspiration, skin hot, the pulse much accelerated; she could not take the breast. Tinct. aconiti and ipecacuanhæ, one drop of each was ordered to be given alternately every quarter of an hour. Relief was afforded within an hour. A messenger was sent to me, to prevent a repetition of my visit in the evening. I saw her the next morning, and ordered her Hepar sulph. This completed the cure. She did not require a third visit. When I prescribed for this case, it was with the determination that it should be the experimentum crucis; and that if a mitigation of the child's sufferings did not speedily take place, I would abandon the homœopathic treatment, and resort to the old system of leeching, emetics, etc., etc. Neither imagination nor diet could have had any share in the recovery; for the patient was an infant, and its only diet its mother's milk; and the same remarks will apply to another case, occurring at the beginning of this year.

"Mr. B.'s infant, aged six months, a stout plethoric child, was taken ill on the 20th of January, 1851, with cough and febrile symptoms. I saw him on the 22nd, the cough was dry and constant, face flushed, hot skin, quick pulse, and constant thirst. Tinct. aconiti and bryoniæ, one drop of each was ordered to be given alternately every half an hour. The patient was relieved before the evening. January 25th.—The cough being still somewhat troublesome, and accompanied with mucous râles over the chest, tinct. ipecacuanhæ, gtt. vj. was given in divided doses: the child required no further treatment.

[1] A man of most unsound faith, both in medicine and religion. Ed. Lond. Journ. of Med.

"A third case affecting the respiratory organs, likewise occurring in a child, who knew nothing of homœopathy, shall here be inserted. I was sent for on the 30th of September, 1850, to see Miss M. R., æt. 12, who was affected with bronchial irritation, fever, headache, and spasmodic cough Aconite was taken throughout the day, in one drop doses. My opinion given to her sister was, that something more serious than ordinary cough was impending. Tinct. of bryonia was administered the following day ; in two days, hooping cough was fully developed ; tinct. of nux-vomica was now prescribed in drop doses, and this had a marked effect upon the character of the cough : in ten days she was quite well, and returned to school. No other medicines than the above-mentioned were administered. A slight return of the cough took place after exposure to a cold east wind, but ipecacuanha in one drop doses gave relief within two days.

"Another case of a different character tended to make him still more satisfied with the superiority of homœopathic practice.

"Cerebral Convulsions. On the 30th of January, 1851, I was requested to visit Mr. H.'s son, aged thirteen months : he had been seized previous to my arrival, or that of another practitioner (who in my absence had been sent for), with general spasms of a violent character, accompanied by insensibility. The muscles of the face I was informed had been distorted, and the thumbs turned inwards towards the palms. When I saw him the face was very pale, and covered with a cold sweat ; the gums were swollen from the pressure of the molar teeth upon them. I scarified the gums, ordered cold to be applied to the head, and administered tinct. of belladonna, one drop. 31st.—Has had a restless night, continued thirst, at noon the convulsions returned. Ordered tinct. ignatiæ one drop, to be taken immediately, and tinct. coffeæ one drop, to be administered in the evening for the purpose of producing sleep. From this time the spasms did not return, and convalescence rapidly took place. The teeth did not pierce the gums for several weeks afterwards, so that very little, if any benefit, could have arisen from the scarification of the gums, and I did not resort to it in the second case of difficult dentition occurring in Mr. S.'s child, aged eleven months. He was suffering from cough, hoarseness, hot skin, thirst, and restlessness ; the eyelids were glued together with muco-purulent matter, and he was much griped. Castor oil had been given to him before I was sent for. Ordered nux-vomica, two globules, third dilut., to be taken every four hours. The next day I found him much relieved ; excessive thirst was his chief ailment. Chamomilla was ordered, and the child was convalescent on the following day.

"The efficacy of minute doses of chamomile is strikingly exemplified in the two following cases. Mrs. P.'s child was seized (without any evident cause) on the evening of February 7th, with pain of abdomen and vomiting. Chamomile two drops, in divided doses, was all that was required to relieve him. The second case was Mrs. A.'s child, who sent for me on the evening of April 21st, 1850. He was complaining of pain in the stomach, accompanied by vomiting; the cause assigned was eating 'early greens'. One drop of the tinct. chamomil. gave immediate relief.

"So soon as I was convinced that the homœopathic preparations, administered according to the homœopathic law, were more efficacious in curing acute cases of disease than the old method of practice, I corresponded with several of my medical friends of the allopathic school, mentioned my experience on the subject, and requested their opinions. *Not one met the case on its merits;* one ridiculed the idea that such effects could possibly result from a decillionth of aconite, etc. ; another dismissed the subject very summarily by saying, that 'he knew nothing whatever of homœopathy, but that he considered the administering of such small doses in really dangerous cases to be a trifling with human life': another's response was to this effect—'I have seen some narrow escapes from homœopathic treatment'. One friend, whilst opposing homœopathy, made this somewhat remarkable admission—

'I have no doubt but that patients will get well sooner under the homœopathic treatment'; a fifth saw no objections to my continuing the investigation secretly, believing that a return to my 'first love' would be the result of a more extended experience. Several of my patients of the higher ranks asked me whether I was practising homœopathically. I replied in the affirmative, but added, that as yet my mind was not sufficiently decided upon the matter; they did not care how I treated them, providing I did so conscientiously; and all my medical correspondents urged me not to proclaim my 'perversion' (so they termed it) until a few months longer should have passed away.

"The following cases are a few selected during those months of probation.

"Scarlatina. Mrs. L., near Alnwick, sent for me on the 20th of August, 1850, to see her niece. I found her labouring under a smart attack of scarlatina, with swelling and redness of the tonsils and fauces. Belladonna tr., six drops, was all that was required to cure her; her recovery was so rapid and complete, that it was only requisite for me to see her twice.

"The cases which follow occurred in adult subjects; they did not, with one or two exceptions, suspect me of any homœopathic tendencies, they having formerly heard me express myself strongly against it. Imagination, therefore, cannot be considered an element in the result; but let it be borne in mind, that there was no concealment on my part when questioned.

"Hemiplegia with Cerebral Congestion. D. T., Esq., aged 62, residing four miles from Alnwick, has had two attacks of paralysis in Edinburgh; he is now hemiplegic. On April 20, 1850, I was summoned to see him. He complained of headache and noise in the ears; the eyes were dull; the conjunctiva injected; pulse 90, full and bounding. He presented the same appearance (so Mrs. T. informed me) prior to his last attack; he has been accustomed to take colocynth pills for the purpose of relieving constipation. Lachesis, six doses, of three globules each, relieved him in a week, and his health has been uninterrupted (with the exception of his hemiplegic constitution) ever since.

"Congestive Headache and Catarrhal Ophthalmia. Miss —— had for some years suffered the infliction of an issue in one leg, in order to avert headache and ophthalmia (which desirable result, however, it failed to produce). At my recommendation the issue was healed. Pulsatilla gave her relief. The ophthalmia does not return, and the headache is much less severe in its character.

"Catarrhal Ophthalmia, with Ulcer of the Cornea. Miss —— sent for me to Alnemouth, July 18, 1850. She was suffering from inflammation of the conjunctivæ, accompanied by a febrile state, profuse lachrymation, and intolerance of light. On the right cornea was a small ulcer. Aconite and belladonna were the remedies at first employed; afterwards, sulphur, calcarea, and silicea. She completely recovered.

"Bronchitis. Miss K. was seized on the 19th of March, 1850, with severe frontal headache; pain in the sternum, increased by deep inspiration; frequent hard cough without expectoration; quick pulse; thirst, and hot skin. Aconite and bryonia were administered alternately every three hours. Before the expiration of twelve hours, a marked remission of the symptoms took place, followed by refreshing sleep. Mercurius, sulphur, and china, were the only additional remedies resorted to.

"Cynanche Tonsillaris. Elizabeth R., aged 21, was suffering on Jan. 14, 1851, from inflammation and swelling of the cellular membrane of the fauces and tonsils, accompanied by fever, difficulty of swallowing and speaking. Aconite and baryta carbonica cured her in twelve hours.

"Gastrodynia. Isabella S. is subject to pain in the stomach after eating, with occasional vomiting of food. Pulsatilla, sulphur, and baryta carbonica cured her: up to the time of my last seeing her (eleven months having elapsed) there has not been any return of the disorder.

"Gastrodynia and Hematemesis. C. B., a servant girl, left her place on account of severe and continued pain in the stomach, accompanied by frequent vomiting of food. She had been under medical treatment, and had swallowed a large quantity and a considerable variety of drugs without deriving any relief. She had resided in the country for six weeks with her mother when I first saw her, on the 22nd of December, 1850, but was not better. Pulsatilla immediately relieved her, and followed by sepia, completed the cure. Three months afterwards she went to service in the country; her complaint returned, and in addition to the former symptoms, she threw up a large quantity of dark grumous blood. I ordered her bryonia, which completely relieved her.

"Dyspepsia, Anorexia, and Vomiting of Coffee-coloured Fluid. Miss —— has been the subject of this affection for several years; she is opposed to homœopathy, but I persuaded her to try nux vomica, which gave her greater relief than any former remedy. If imagination had any influence in this case, it certainly was not exerted in favour of homœopathy.

"Vomiting and Acute Pain in the Stomach. Miss ——, residing some miles from Alnwick, was seized on the night of January 17th, 1851, with constant vomiting and violent pain in the epigastric region, increased on pressure. She attributed her illness to having eaten boiled greens at dinner. Repeated draughts of tepid water emptied the stomach, but nothing except bile was ejected. I saw her at 3 a.m. and gave her chamomilla tr., one drop; two doses of this relieved her. The next day, on account of headache, pulsatilla was given, and three doses of sulphur on the following day; convalescence was then complete.

"Gastrodynia and Vomiting of Food. Miss ——, residing in the country five miles from Alnwick, has for a long time been subject to anorexia, pain in the stomach after eating, and headache. She has during this period become emaciated and desponding. I saw her on the 18th of January, 1851, and ordered her three doses of sulphur, followed by sepia, twelve doses. 27th. Saw her again. The appetite has improved; pain of stomach has ceased; vomiting occurs more rarely. Feb. 4th. Continued improvement; complains only of debility. Ferrum, eight doses. Neither pain nor vomiting has returned up to this date, March 21st.

"Cholera Britannica. Several cases of this affection came under my treatment in May, 1850. I have selected for illustration the following. Miss B., aged 14, was attacked on the 12th of May, 1850, with vomiting, purging and tenesmus, hot skin, quick pulse and thirst. Belladonna, antimonium, rhubarb, sulphur, nux vomica, and calcarea, were administered in succession. Her convalescence was complete in eight days, not requiring tonics to restore strength. The disorder was epidemic, and under the ordinary treatment was much longer in its duration.

"Miss B., a phthisical subject, was seized, on the 9th of August, 1850, with vomiting, and purging, accompanied with coldness of the extremities. Veratrum and arsenicum were given, and she was convalescent on the 14th.

"Mr. ——, brother of this lady, was taken ill with somewhat similar symptoms on the 11th of August. Mercurius restored him in two days.

"Miss G. was seized, on October 31st, 1850, with the ordinary symptoms of autumnal cholera, attended by smart fever, face flushed, pulse 110. Aconite, veratrum, arsenicum and ipecacuanha, relieved her in four days, and she regained strength immediately without any other drugs.

"I could add several similar cases, one of a lady, aged 80; but it is unnecessary. I will merely remark, that, with one exception, all were alike ignorant of their being the subjects of homœopathic treatment.

"Pleurisy. Mrs. R., residing two miles from Alnwick, was seized on January 19, 1850, with pleurisy of the right side of the chest; respiration much impeded; pulse strong and frequent; hot skin, with thirst. Aconite and arnica alternated relieved her in two hours. The cough yielded in a day or two to ipecacuanha.

"Neuralgia Facialis. Miss —— has been for years subject to severe attacks of facial neuralgia, accompanied by swelling and redness of the lining membrane of the mouth. She had been treated by leeches and various remedies, but the paroxysms yielded slowly, and great prostration of strength was the invariable consequence. I was called to see her on the 17th of March, 1850, and ordered her belladonna, three globules every quarter of an hour; within two hours, relief was afforded, and the cure was completed by arsenicum, succeeded by graphites. No tonic nor any other remedy was required, as had been the case invariably after former attacks.

"A lady who knew of the preceding case sent for me; she was suffering in a similar way; she suspected that homœopathic remedies had been employed upon her friend. I told her that her suspicions were correct. She was not anxious to have them used in her own case, but I overcame her scruples; her thankfulness and surprise for the complete and speedy relief afforded by belladonna was to me most gratifying.

"Threatened Abortion. Mrs. A. (who had previously miscarried at about the same period), was about thirteen weeks advanced in pregnancy. She was seized on the night of Sunday, April 9th, 1850, with bearing-down pains, and sanguineous discharge. Homœopathic preparations and doses of belladonna, aconite and opium, cured her, and gestation went on to the full period.

"Puerperal Inflammation. Mrs. G. was seized on June 23rd, ten days after delivery (under the superintendence of a midwife), with shivering and pain in the uterine region, increased by pressure, attended by suppression of the lochia, and mammary secretion. Tongue was red and glazed,—pulse 110, with constant thirst; anxiety and suffering were depicted in her countenance. Aconite, chamomilla, nux vomica, and calcarea were successively administered. She was convalescent on the 30th, and has continued to nurse her infant.

"Odontalgia. Several cases of almost instantaneous relief have occurred to me; I will relate the particulars of only one. I was called to Master B., suffering from violent tooth-ache, arising from two decayed molars, in the right side of the upper jaw: the gums were hot and swollen. Belladonna and aconite taken alternately every quarter of an hour, afforded speedy and permanent relief, and extraction by the surgeon was rendered unnecessary.

"It would occupy too much space to give details of many *chronic cases* in which I was satisfied of the superiority of the homœopathic practice. In diseases peculiar to women and children, in the protean forms of hysteria and dyspepsia (some of the latter affection we have reported already), we have in our materia medica resources of the most satisfactory kind. In one case always present to my mind, the sufferer who had for long been the victim of daily and nightly opiates, has not for more than twelve months taken a particle of this drug, pain and restlessness having been most effectually relieved by homœopathic preparations *alone*. Those conversant with the distressing sequelæ of opiates, can readily appreciate the greatness of such a boon.

"One case of anasarca I will relate, simply because the subject of it, a man aged 65, had been under allopathic treatment without gaining any relief by it. When I first saw him, his legs and feet were very much swollen and œdematous, ascites likewise existed. The urine was scanty, and of a deep red colour. After taking bryonia tinct., one drop twice in the day, followed by pulsatilla in the same doses, the swelling almost *entirely* disappeared.

"Profuse Discharge of Mucus from the Nostrils. A lady, the subject of this troublesome affection, consulted me respecting it. She was cured by two doses of nux vomica.

"Rheumatism and Sciatica. Thomas R., aged 45, had been confined to the house for two weeks, but had suffered from rheumatism for some weeks prior to his keeping within doors. I found him unable to walk, complaining

of muscular pains in the back and loins, with severe pain down the course of the sciatic nerve. Two days after taking as many doses of bryonia, he was at his out-door work, and has continued to work ever since.

"*Had I continued to entertain doubts upon the reality of action in homœopathic remedies, these would have been removed byt he following proof. I gave a lady for a chronic affection, Mercurius nine globules, divided into three doses; upon calling upon her a few days afterwards, she told me that salivation had ensued. Let it be remarked that she was ignorant of the remedy prescribed, and moreover believed that homœopathic medicines were inert.*

"The foregoing cases then, each one treated by myself alone, convinced me that all my pre-conceived opinions upon homœopathy were erroneous, for it was to the *action* of the remedies administered that the results were due."

We have not space to examine in detail Dr. Ransford's cases; but they are so essentially defective in all that gives value to the history of therapeutic experiments, so identical in their getting up with the style usually adopted by bold charlatans, and so unlike the precise and cautious statements of a truth-seeking scientific man, that we think that by quoting them, with the author's remarks, we have done, perhaps, all that is required to point out their worthlessness. A word or two, however, may be said in reference to the astounding paragraph which we have placed in italics, in which Dr. Ransford announces that, which if it could be repeated, would be admitted by us as a crucial experiment in favour of infinitesimal doses.

If Dr. Ransford salivated his patient with eight globules of a mercurial preparation, he was not administering the drug in Hahnemannic, but in ordinary doses. If patients can be salivated with infinitesimal doses of mercury, the discovery would not have remained for Dr. Ransford to make; and we can only say, that if we be shown globules prepared in such a way as only to contain the millionth part or the decillionth of a grain of mercury, and if we can also see these globules, in our own hands, or in the hands of trustworthy persons, produce salivation, we will from that moment cease to assert that quantities so minute have never yet been proved to produce an effect upon the animal economy. Dr. Ransford's case of salivation, however, proves too much for his new friends; he ought to have known that the homœopaths delight in telling their patients that their medicines cannot salivate, or produce any other violent action! We advise Dr. Ransford to learn from Hahnemann's *Organon*, and Mr. Everest's sermon, the nature of homœopathic Mercurius.

Dr. Ransford's dashing exploit with Mercurius is an excellent example of a circumstance which was alluded to at Brighton, and which, as regular readers of the homœopathic press, we have long been aware of,—the utter impossibility of stating the homœopathic creed. It is likewise a good illustration of what Dr. Cormack described upon the same occasion, as "the Protean wiles with which homœopathy sets honesty, consistency, and common sense at defiance". Let us compare Dr. Ransford's salivation story with the writings of Hahnemann, Drysdale, and Black—the master, and two of his most famous British pupils.

In a paper by Dr. Drysdale, in the first volume of the *Homœopathic Journal*, of which he is one of the editors, he says that homœopathic remedies possess neither physical nor chemical characters; and produce no sensible effect, except the removal of the disease. Dr. Black, in his *Principles of Homœopathy*, writes as follows: "No danger whatever can arise from the administration of the small doses of mercury used in homœopathic practice; so that the slightest danger of injuring the constitution, the great bugbear in allopathic practice, need not be dreaded" (p. 117). Lastly, we think that the following short paragraph from Hahnemann settles the point as regards Dr. Ransford's homœopathic practice. "In the employment of the most appropriate homœopathic remedy, it is only the symptoms of the medicine

that correspond to the symptoms of the disease that are called into play, the former occupying the place of the latter (weaker) in the organism, and thereby annihilating them by superiority of power".—*Organon*, CLV.

As Dr. Ransford is evidently in the hot or first stage of his love, when caresses are yearned for, and criticism ill submitted to, we cannot leave him without one word of comfort and of kindness. "When", said our fair friend in the song, will the laird o' Drummeller "dance like Tam Glen ?" "When", exclaims Dr. Ransford, "will the ordinary doses of blue pill, sublimate, or calomel salivate like our glorious globules—the infinitesimals which offend no palate, which have neither physical nor chemical characters ?" Dr. Whateley, with the ladies of May Fair and Belgravia, in ecstasies re-echo, "WHEN ?" But to be serious ; it is evident that our author not only belongs to that rapidly increasing and most influential class, recently described in *Household Words*, under the honourable and thrilling designation of WHOLE-HOG MEN, but that he is entitled to the most exalted position among them. When the Whole-Hog Men get a Royal charter, (which it is said they are to apply for during next session), they will naturally require to appoint examiners, and in discharge of a public duty we now recommend for elevation to the office of President of that Board, the ex-Examiner of the Royal College of Physicians of Edinburgh. We feel assured that the whole of the press—the Fourth Estate of this Realm—will concur in giving him a first-class certificate.

DR. MACLEOD issues his letter to Professor Simpson, from a Water-cure Establishment at Benrhydding, Otley, in Yorkshire, of which he has the charge; but from which we have heard he was recently on the point of being displaced by the proprietors. We have been told, that along with the testimonials of other candidates, those of Dr. Ransford were sent to the shareholders, upon a probable vacancy being rumoured. There is not much to notice in Dr. Macleod's pamphlet. It is the autobiography of a shallow, self-conceited young man, leavened with a great deal of abuse and misrepresentation of Rational Medicine, especially as taught and practised in Edinburgh. Dr. Macleod eulogises very much his own industry when a student ; but the method he pursued, if correctly chronicled, was certainly ill-adapted to the formation of sound views in therapeutics.

Dr. Macleod states that, though private practice in Edinburgh was "better for his pocket", he eagerly tried to obtain his present post, "with little regard to pecuniary remuneration", and for "the rare opportunities it might afford for the development and promulgation of truth". We should like to know the extent of Dr. Macleod's pecuniary sacrifice. It is sad to think that this young man should have sacrificed his fortune as well as his professional status at the shrine of hydro-homœopathy,—a nondescript system, which is even more disreputable than real homœopathy. His pamphlet is very unfair in its statements, and as offensively flippant in its style as it is heterodox in its philosophy. In point of scientific knowledge and literary tact Dr. Macleod seems to be superior to Dr. Ransford; but he is less ambitious for status in the fraternity in which Dr. Ransford is so pre-eminently entitled to hold office.

DR. HENDERSON possesses the unenviable notoriety of clinging to the emoluments of a school by which he is despised, and of eating the bread of a University, the fame and income of which he is rapidly destroying. In point of talent he as much excels Dr. Macleod, as Dr. Macleod excels Dr. Ransford ; but his controversial cleverness is of that character which distinguishes the unscrupulous advocate : he has not in him any of the bearing of a right-minded pleader : weighty points in morals and in ethics are decided by quibbles, and throughout, there is a scattering of malicious and irrelevant abuse of his colleagues, and an artful attempt to reach "the Patrons" through their passions, as if they were an illiterate jury, whom he was addressing from the bar of the Old Bailey.

On the 24th of June last, the Medical Faculty of Edinburgh, at a meeting attended by ten out of the thirteen members, unanimously adopted the following resolutions :

"1. *That the public profession of homœopathy by the Professor of General Pathology, is inconsistent with the efficient discharge of the various duties which belong to that chair, and is calculated to injure the University as a Medical School.*

"2. *That the Senatus Academicus be requested to transmit a copy of this resolution to the Patrons of the University, together with the expression of a hope on the part of the Medical Faculty, that some step may be taken to avert the danger thus threatened to the University.*"

Notwithstanding Dr. Henderson's pages of quibbling and declamation, we still remain unable to perceive any ambiguity in these resolutions. He says: "It is scarcely possible to peruse the resolutions without being reminded of the celebrated paradox, that language was given to man in order to conceal his thoughts". On the other hand, the meaning conveyed to our minds by reading the resolutions was, and still is, exactly the plain, common-sense meaning of the words used ; viz., that a man publicly professing homœopathy cannot efficiently discharge the duties of the Edinburgh chair of pathology, which, in addition to the teaching of pathology, embrace the examination of candidates for the degree of doctor of medicine. In performing these functions, Dr. Henderson must either keep back his convictions, or he must avow them, and thus endanger his professorship. By selecting the former alternative, so far as he is concerned, he has reduced medical teaching and medical examining to a hollow formality—a mere selling of diplomas ; for no candidate can be approved by Drs. Alison and Christison, whose thesis and prescriptions are in accordance with the public profession of Dr. Henderson.

After stating that he keeps free from homœopathy in his lectures, Dr. Henderson attempts to show that it is quite honourable and quite moral in him to sit at the same examining board with Drs. Alison, Christison, and Bennett, and Mr. Syme. His morality and his medical creed are so very strange, that we think it best to give his own account of them ; no language of ours could so well point out the character of the man, and the idiosyncrasies of his mental constitution. It will be observed that he quotes Dr. John Forbes of London, as is now the fashion, both with real and bastard homœopaths. Drs. Ransford and Macleod likewise call him in to their aid ; but what advantage they get by garbling the writings of that physician we cannot perceive. Dr. Henderson says,—

"There is but one other professorial duty which I have to perform—the examination of candidates for graduation ; and I have been told by one of the members of the Faculty, who concurred in the resolutions, that there are two parts of that examination, with the conducting of which a *belief* in homœopathy is supposed to be inconsistent. One of these is the criticism of the two or three prescriptions which each candidate is required to write. Now I have not only never denied the existence of allopathic and antipathic modes of administering medicines, but six years ago publicly and plainly, in a treatise on homœopathy, expressed my conviction that such methods of treatment have their measure of advantage, and that in judicious hands many of them are of no inconsiderable service. It matters not that I believe the homœopathic method to be of greatly superior efficacy ; homœopathy is not taught as yet by any professor in the University, and I am not entitled to demand from students a knowledge of what they never were required to learn. In admitting that there are other modes of treatment besides the homœopathic, which may be of service to the sick, I am no more to be charged with inconsistency, than I should be in maintaining that there are slow coaches on the old roads, as well as railway trains on the new. And where only slow coaches are permitted to be employed, I can see no reason why I should be disqualified for passing my opinion on them, merely because

I deliberately think that railway carriages are greatly to be preferred. If a very moderate estimate of the common remedies be inconsistent with a candid judgment of ordinary prescriptions, will the Faculty hold that one of the most eminent of their own school, Dr. Forbes of London, could not discharge that very simple duty, and would be unfit for a medical professorship, because he has declared that things in the old system have came to such a pass 'that they must mend or end'? I apprehend they would not; and yet I do not suppose that I think so meanly of the old system as that gentleman does.

"Precisely the same remarks apply to the other part of these examinations—the criticism of such theses as are submitted to my judgment. The exacting of such essays at all from candidates is an idle custom, and, as in the examination for admission into the Faculty of Advocates, little if anything more than a form. The advocates, I understand, invariably buy theirs; the medical graduates *may* do the same: there is no check to prevent them, and they doubtless often take advantage of the laxity. That I am not singular in thinking lightly of this great duty, will appear from the following anecdote of the late Dr. Gregory, which I have heard from the benignant lips of the present occupier of his chair [Dr. Alison], the almost fabulous strength of whose conservative principles is attested by the circumstance that they could not bend his noble nature to a seeming acquiescence in these proceedings of the Faculty. That celebrated professor, on being condoled with by a friend, on the labour of perusing so many long dissertations as were piled on his table, replied to the following effect: 'You don't suppose I read them through! Do you eat up a whole gigot in order to know the quality of your mutton? A slice is enough.' As for me, I may think our inaugural mutton not always of the best quality, but if it be as good as our pastures at present afford, I am bound to be satisfied, trusting that the progress of scientific culture will provide us by and by with a superior description of both." (pp. 13, 15.)

If the Medical Theses were in Latin, and notoriously written by grinders, as in the days to which the anecdote refers, we could better excuse its introduction; but, as it now stands, it is like many other parts of Dr. Henderson's pamphlet, introduced for the purpose of, by inference, suggesting a calumny. It is very well known, that since 1837, the Edinburgh Theses have been written in English, and have been distinguished for their great ability. And it is also known, that they are carefully classified, according to their merits, by the Medical Faculty.

In farther justification of our criticisms, we quote the conclusion of the pamphlet—the peroration to the Town Council.

"The *odium medicum* can be more tyrannical than the employers of Haynau, and more intolerant than the imperial jailor of Siberia. It may not be easily believed that the prompter of the notable resolutions of the Faculty is the conductor of a medical print published weekly in London, and under the ostensible editorship of the notorious coroner of Middlesex, and radical member for Finsbury; yet I can discover no other explanation of that precipitate revolution in their opinion and purposes to which I have adverted in a former part of this letter. While some member of the Faculty was penning the admission that they did not see 'how they could take cognizance of the principles upon which their colleague chooses to conduct his private practice', that publication had begun a series of abusive articles, in which the Faculty were threatened with extinction if they did not endeavour to get rid of their obnoxious colleague, or protest against his heresies. It is astounding that men in their position should have been terrified by so much bad English, and bad temper, and from such a quarter too; or should have attached the smallest weight to the statements of a writer, who, as Addison says of all 'party liars', is plainly anxious 'to commend his zeal, without any concern for his veracity'. If, in order to prosper, the Medical School of Edinburgh must doff its dignity and independence, and stoop to such a patron

as this, I hope, for the honour of the country, that prosperity at such a price will appear to my fellow-citizens too disgraceful to be endured. I believe, however, that no such humiliation is necessary in order to preserve even that kind of prosperity which the Faculty seem to regard as of primary importance ; and nothing can contribute more to such a result than the cultivation, by each member of that body, of his own department of science without prejudice and without fear, and the exercise of a liberal spirit towards his colleagues. These may not be the arts to win the applause of vulgar and violent men, but they are essential to the happy consciousness of personal rectitude, and to the approbation of the good and the wise ; whose approbation alone is the sure foundation of honour as well as of success. I have the honour to be, my lord and gentlemen, your very obedient servant, Wm. Henderson." (pp. 23, 24.)

We have now enabled our readers to judge of the three pamphlet writers; but let us leave the mere personalities thrust upon our notice by these gentlemen, and allude to a subject of more general interest and importance.

In our number for June, p. 588, we laid before our readers the Resolutions of the Edinburgh College of Physicians, in which homœopathic charlatanry and its abetters were repudiated. The Edinburgh College did well in passing those resolutions ; but we must say that their subsequent inaction requires some explanation. To rest satisfied with an appeal to the honour of such men as the authors of the publications, the titles of which we have placed at the head of this notice—simply to ask such men to resign, is, we fear, an indication of want of power. What a gratifying contrast to the inaction at Edinburgh, is the uncompromising conduct of the Provincial Medical and Surgical Association of England, which at the last meeting—the most numerously attended of its nineteen anniversaries—unanimously declared— "That there are three classes of practitioners who ought not to be members of this Association, viz.—first, real homœopathic practitioners ; second, those who practise homœopathy in combination with other systems of treatment ; and third, those who under various pretences meet in consultation, or hold professional intercourse with those who practise homœopathy." If the Edinburgh College of Physicians have not the power of expelling quacks and others who set its laws at defiance, it is its duty to demand an amended charter, giving the same power of refusing to admit, and of expelling, which is possessed by unchartered bodies, and without which no community can continue respectable. If an amended charter cannot be obtained, then let the honest men abandon the College ; for to remain in compulsory fellowship with Henderson, Ransford, Macleod, Macdonald, and Gregory, is a truly humiliating position to the individual fellows; and the existence of a College openly and avowedly composed of regular and irregular practitioners, is an abomination which the profession will not long endure. Action, vigorous and determined action, must be taken in this matter.

We would also call upon the graduates of the Edinburgh University to aid the Medical Faculty in their attempts to eliminate Dr. Henderson. "The question" (as Dr. Cowan well remarked at Brighton) "is one of principle, not of doses—one of morals, and not of etiquette". If the Patrons do not, or cannot respond to the voice of the profession, as addressed to them through the Medical Faculty, or if Dr. Henderson do not voluntarily resign, the doom of Edinburgh as a School of Medicine cannot, we fear, be averted ; for already has its reputation been deeply wounded by lengthened tolerance of a colleague of unenviable fame. Parents very naturally feel that apart altogether from his homœopathy, Dr. Henderson's public ethical profession is a dangerous example to unexperienced youth.

A Practical Treatise on the Management of Diseases of the Heart, and of Aortic Aneurism, with especial reference to the Treatment of those Diseases in India. By Norman Chevers, M.D., Civil Assistant Surgeon, Chittagong, Bengal. pp. 144. Calcutta : 1851.

The present work of Dr. Norman Chevers is an important contribution to the treatment of Diseases of the Heart and of the Aorta. This author had creditably distinguished himself in this country by his pathological investigations, and this treatise on cardiac diseases will still farther increase his reputation, more especially in a portion of the globe where this class of affections appears hitherto to have been inadequately studied, and where, indeed, they appear but rarely to occur, at least, comparatively with their frequency in European countries. We are happy to quote the following passage from the Preface, and we need hardly remark, that we cordially concur in the sentiments therein expressed.

"I am not anxious to recommend the perusal of this treatise to extra-professional persons. It is addressed exclusively to the profession : and I am confident that whatever benefit any reader, not well versed in pathology, might derive from the application of the hygienic rules which it contains to his own case, or to the case of his friends, would be more than counterbalanced by the disadvantage of his contracting a certain proportion of those erroneous views, exaggerated apprehensions, and impulses to injudicious acts, which thickly haunt every item of that grievous evil—a little knowledge of medicine."

In the First Chapter, the author gives a general view of the diseases of the heart and their treatment, remarking very justly, that although the accurate knowledge which has been lately acquired of the pathology of the heart has not hitherto thrown any very striking light upon the treatment, yet the attempt to connect the two should ever be the object of the practitioner, who should reflect, "that pathology and therapeia are inseparable, and that each is the only satisfactory expositor to the other". The author then proceeds to remark, that notwithstanding the serious nature of cardiac disease, it should be recollected that the heart possesses a great variety of compensatory resources to relieve itself from temporary embarrassment, or even to adapt itself to the inconveniences caused by permanent disease, so that it cannot be wholly disabled, unless by causes which absolutely suspend its nervous supply, or destroy some vitally important part of its mechanism. "When", says Dr. Chevers, "we find that life may be continued for many years where the heart is crippled by such defects as closure of the ostium of the pulmonary artery, or obliteration of the thoracic aorta, a hope of obtaining the aid of nature's adaptive resources in our plans of treating much less formidable impairments of the organ, becomes our leading encouragement. We then learn to perceive the necessity of not trusting merely to the symptoms in heart disease ; but, having diagnosticated the particular lesion which exists, our object is to be enabled to judge, with almost mathematical precision, what consequent morbid changes are likely to occur ; and to perceive, with the utmost clearness, those saving adaptations of parts and compensatory alterations of functions, which also have a tendency to become established. This done, our main efforts will be directed to averting the former, and to promoting the latter." (p. 7.)

We cannot resist the temptation of comparing the above passages with some remarks made by Dr. Semple, in a paper published in this Journal in November last, upon the same subject as that treated so ably by Dr. Chevers, and of expressing our satisfaction, that two writers in different parts of the world should have arrived at the same important conclusions. "If", says Dr. Semple, "it can be proved that actual organic disease of the valves of the heart may exist for a considerable period, and without shortening the average duration of life, such a conclusion may tend to divest this class of

maladies of some part of the terror which their existence now so commonly inspires. . . . . And if such be the consolation which may, I think, be fairly afforded to those suffering under confirmed and extensive disease, how much more applicable is it to those who are affected only by some of those minor affections of the heart and its valves, which occur so frequently among the sequelæ of rheumatism ?" In another portion of the same paper, Dr. Semple alludes to the accuracy which now attends the diagnosis of cardiac disease, but asks, "whether this branch of medical science has not been pushed somewhat too far in modern days ; and whether, led away by the brilliancy of the researches into cardiac diseases, and fascinated by the simplicity which now attends their investigation, some practitioners do not lay too much stress upon the aids derived from auscultation, and neglect the attendant phenomena, which modify the healthy and morbid conditions of the central circulatory organ ?"

Dr. Chevers then proceeds to show that most of the prominent symptoms which occur in cardiac disease, are evidences of nature's attempts to assist the heart in the performance of its functions, or to overcome an impediment to the circulation. Palpitation, accelerated pulse, quickened respiration, and the signs of hypertrophy, are some of the earlier, more favourable, and more successful symptoms ; while dilatation, pulmonary, hepatic, splenic, and renal engorgements, hæmorrhages, dropsical effusions, and dyspnœa, are the later and less fortunate.

In the Second Chapter, the author sketches out the following indications of treatment, which he comprises under six heads. "I. To diminish, if possible, the valvular or other immediate causes of obstruction. II. To endeavour to remove all causes of impediment to the circulation existing in the lungs, abdominal organs, and capillary system generally. III. To lessen vascular distension by reducing the bulk of the circulating fluid, without impoverishing the system. IV. To sustain or restore the power of the heart, and to reduce the capacity of its dilated cavities. V. To equalise the circulation, and to maintain free vascular action in the surface, by regulating the temperature, clothing, etc., and to provide due access of pure and well-oxygenised air. VI. To remove and avert irritation and excitement of the nervous system, and to procure, as far as possible, rest and tranquillity of body and mind." (p. 13.)

In fulfilling the first indication, the author of course does not pretend to recommend any plan for the removal of old-standing obstructions of the cardiac orifices ; but he very justly and very forcibly points out the necessity of paying the greatest attention to the earliest evidences of endocardial and arterial thickening, and of removing the deposit while it is still recent and plastic. The impediment may be due either to the presence of clear fibrinous deposit in the sub-endocardial fibrous tissue, or to the deposition of lymph or fibrinous coagula upon the free endocardial surfaces of the obstructed orifice ; and each of these conditions will require appropriate treatment. The author admits, however, that it is not very easy to distinguish these two states, but he considers that the sounds of the heart will materially assist the diagnosis, and that these will be louder when the deposit is on the surface of the valves, than when it is below the lining membrane. He also conceives, that the case is far more curable when the deposit is confined to the fibrous tissue, than when it is situated upon the free surface of the valves. The treatment which the author considers to be most beneficial in removing the products of inflammatory action from the cardiac orifices, consists in the cautious administration of long-continued mild courses of mercury, alternating with iodide of iron, and iodide of potassium ; but he deprecates salivation, starvation, or the excessive use of tonics, or of iodine. The mercury should be given in small doses, and carried only so far as just perceptibly to affect the patient's breath. The mercury should be discontinued at the end of about two months ; but the use of the various preparations of iodine may be

persisted in, with occasional intervals, for at least a year. Frictions of tartarised antimony should be continued as long as they can be borne, and, subsequently, one of the best external applications is a plaster spread with ung. hydrargyri mixed with camphor. But far better than any treatment adopted *after the deposit has taken place*, is the attempt to cut short the disease at its onset, or even to prevent its appearance; and although there are few practitioners who are ignorant of the risk of heart-disease supervening on acute rheumatism, yet the subject is so important as to justify us in placing the following passage, in reference to this subject, before our readers.

"In every case of acute rheumatism, cardiac inflammation is threatened; and in every case of acute rheumatism occurring in a young adult, the danger of that untoward complication is so imminent, as almost to appear inevitable to one who has repeatedly watched these cases. Here, then, it becomes one of our leading duties to watch, almost hourly, for the first evidences of the change from mere febrile excitement of the heart, to that evident disturbance and embarrassment; that disordered, but muffled action, which generally characterise the onset of acute cardiac disease. These warnings may usually be recognised and acted upon long before præcordial distress is complained of, or the patient is aware that his chest is in any way affected. This is the stage at which a small local bleeding, followed by active counter-irritation, and the cautious use of mercurials, is most effectual. It is true that the early employment of these means will not always prevent the development of the advancing pericardial or endocardial lesions; but it evidently breaks the force of the first onset of the acute disease more effectively, and moderates the attendant symptoms more rapidly, than is almost ever the case, when the same or stronger measures are employed at a later stage." (p. 27.)

Dr. Chevers recommends local in preference to general bleeding, which is in accordance with the views generally held by British practitioners; and in recommending the use of colchicum, he states that in India this drug requires always to be guarded by opium, as in that country a few moderate doses are liable to set up a dangerous and intractable form of diarrhœa.

After treating at large of the remedial measures to be employed in acute disease of the heart, the author next details the methods which ought to be adopted, in order *to remove all causes of impediment to the circulation existing in other organs;* for he very justly remarks that, even where confirmed heart-disease exists, yet, if the other organs of the body continue in a moderately healthy condition, the patient's life may be spared for many years. "We know," says Dr. Chevers, "that the most ordinary forms of exocardial and endocardial disease, adherent pericardium and valvular contraction, certainly do not, generally and of necessity, destroy life, by their own advance and by the influence which they exert in gradually impairing other organs, in less than from ten to fifteen years: and the duration of their progress is found to be occasionally longer even than this. The occurrence of death from causes confined to the heart itself, is a comparatively rare event. In the generality of fatal cases, life is cut short prematurely, either by the outbreak of acute disease in other organs, or by the superaddition of diseased actions of a more insidious character to those gradual deteriorations which the fixed error of the circulation is itself imperceptibly working. It is especially the pulmonary and hepatic structures which suffer under these circumstances. Acute disease of the lungs destroys life in at least three-fifths of the cases of chronic heart-disease." (p. 48.) The author then proceeds to classify the causes of obstruction to the circulation, exterior to the heart, into two divisions, namely, the *permanent*, and the *removable*. Among the *first*, he enumerate malformation of the chest and spine, organic disease of the bronchial tubes and lung substance, large aneurisms of the aorta, stricture or obliteration of that vessel, organic disease of the great abdominal viscera, and obliteration of the great venous trunks: among the *second*, he specifies

bronchitis, pneumonia, ascites, anasarca, immoderate obesity, congestive disease of the abdominal viscera, and habitual distention of the stomach and bowels. Judicious methods are then laid down for ameliorating the patient's condition, as far as possible, in the first class of cases, and for removing the complications in the second.

In enlarging upon the third indication, namely, to *lessen vascular distention by reducing the bulk of the circulating fluid, without impoverishing the system*, the author strongly recommends very great abstinence in the ingestion of liquids, upon the principle that mere distention of the vessels and of the cavities of the heart, increases materially the embarrassment of the circulation in cardiac disease, while, in cases where the quantity of circulating fluid is small, there is entire or comparative absence of dyspnœa. Although, therefore, the author does not adopt the extreme views of Valsalva, he nevertheless recommends, in heart-disease, a systematic reduction in the quantity of the fluid and solid ingesta, together with the production of diaphoresis and diuresis, and the occasional employment of *small* bleedings. In relation to the ingestion of liquids, Dr. Chevers thinks that a very small quantity is required, even in the healthy condition ; and declares his own conviction, founded upon personal experience, that on the average, a man requires no more than about one pint and a half of liquid in the twenty-four hours, in cold or temperate weather, and will scarcely be compelled to exceed two pints in a hot climate; and in all cases of cardiac disease, and in asthma and chronic bronchitis, he strenuously recommends that the patients should reduce their supply of fluids as nearly as possible to the above standard. The directions for acting upon the skin and the kidneys, and for the cautious adoption of small bleedings, are judicious and sensible, but do not contain any novelty worthy of detailed description.

The fourth indication is *to maintain or restore the power of the heart, and to reduce the capacity of its dilated cavities.* In this section the author very elaborately combats the idea of hypertrophy of the heart being a morbid condition of that organ, and regards it rather as a compensatory arrangement to counterbalance the injury to the system which would result from a dilated and therefore attenuated condition of the cardiac walls. He entirely disbelieves in the existence of "concentric hypertrophy"; which disbelief he shares with the greater number of pathologists, who justly consider this state as resulting from muscular contraction only, apart from morbid change ; and eccentric hypertrophy he regards as being always superadded to dilatation : he also combats the idea that a hypertrophied heart induces a morbid condition in other organs, and quotes Dr. Walshe, who has adduced many arguments to prove, that cerebral effusions are by no means so commonly associated with hypertrophy of the heart as is sometimes supposed. Even when these two great organs are both affected, Dr. Chevers by no means admits that the hypertrophy of the heart is the *cause* of the morbid condition of the cerebral vessels : he rather regards the dilatation and weakness of the cerebral vessels to be a contemporaneous change with the dilatation of the heart, but considers that the latter organ has been strengthened by the supervention of hypertrophy, while the cerebral vessels have remained weak from the absence of any similar compensating process, and have therefore eventually given way under circumstances of excitement. Dr. Chevers therefore considers that dilatation of the heart and of the vessels is a truly morbid condition, and that it constitutes a most dangerous form of disease ; but that hypertrophy is to be regarded rather as a healthy than as a morbid process, and that no attempt should be made to treat it by remedial means. This view of the subject is not that which is generally adopted by the best writers and practitioners, and, as far as we know, the only authority who advocates the same opinions is Dr. Joseph Ridge, who is mentioned by Dr. Chevers in terms of great respect : but we are so struck with the ingenuity with which the question is treated, that, while not entirely agreeing with these authors in

their novel interpretation of the pathogeny of hypertrophy, we nevertheless hesitate to condemn their speculations, founded as they are upon practical experience, and backed by some sound pathological reasoning. In the corollary, however, drawn by Dr. Chevers from his previous arguments, we by no means coincide; for he asserts, that the employment of digitalis and other sedatives is inadmissible, either upon occasions of great emergency or when systematically administered. We are by no means advocates of the indiscriminate use of digitalis in heart-disease; when the valves are seriously affected, we believe it to be more injurious than beneficial; but in cases of hypertrophy, without valvular disease; when the impulse of the heart is strong, and the sounds muffled; when the organ beats like a sledge-hammer against the walls of the chest, elevating the ear and head of the stethoscopic observer; when its action is tumultuous, and there is dyspnœa on the least exertion,—in such cases we have been invariably in the habit of employing small doses of digitalis, combined with opium or henbane, and always with the happiest effects; the tumultuous action of the heart gradually subsides, the respiration becomes easy, and the countenance less anxious, and after this cautious administration of the remedy, the patient, although not restored to perfect health, is placed in a condition of comparative comfort.

In considering the fifth indication, the author makes some very appropriate remarks upon the necessity of warm clothing, the avoidance of chills, and daily friction of the whole body, in cases of cardiac disease; and he also insists upon the necessity of a due supply of pure air. He enters also at some length into the consideration of the modes of dress adopted, both in military and civil life, and points out some of the injurious effects produced upon human health by the tyranny of fashion, or the absurd views entertained by the superior military authorities, and he particularly alludes to the stiff stock of the soldiers, the cuirasses worn by some of them, the habit of wearing thick woollen cloth, even in the hottest climates, as among the fertile causes of diseases of the circulatory organs among our army.

In enlarging upon the sixth indication, the necessity of removing irritation and excitement is particularly insisted upon, and the author warmly advocates the establishment of asylums for patients afflicted with heart-disease, as the most humane method of alleviating the sufferings of this portion of the community, and of prolonging their span of life, by extending to them comforts which, at present, they are unable to obtain, such as "the happiness of crouching over a brilliant fire in winter, and of basking undisturbed in the summer sunshine", and an immunity from those cares and anxieties, which prey heavily enough upon those who enjoy tolerably good health, but which inevitably shorten the days of the cardiac sufferer.

We have entered into a somewhat lengthened analysis of Dr. Chevers' book, in consequence of the sense which we entertain of its great merits. We cordially recommend it as one of the best works on the treatment of cardiac diseases which it has been our fortune to peruse. We regret to observe that the author is not acquainted with the valuable papers of Dr. Williams and others on this subject, which have appeared in the London Journal of Medicine.

Homœopathy Unveiled; or Observations on Hahnemann, his Doctrines, and Treatment of Disease. By William Perrin Brodribb, M.R.C.S.E.ng., Member of the Court of Examiners of the Society of Apothecaries. pp. 29. London: 1851.

Of all the forms of quackery which abound in the present day, to the discredit of the profession, and the injury of the public, that which goes by the name of homœopathy is undoubtedly the most flourishing. Yet, strange to say, the success of this system is in the inverse ratio to its merits; and while of all the grades of empiricism it is undoubtedly the lowest, so, on the other

hand, has it the greatest number of disciples and advocates. Every other kind of quackery has some basis to rest upon: we believe that the system of scouring out the bowels by Morison's pills is not destitute of something like a plausible foundation: the drenching of the patient by floods of water externally and internally, as adopted by the hydropathists, is another instance of a good thing carried to excess: and the Mesmeric humbug is not without a certain degree of credibility, and affords some amusing instances of the vagaries of the nervous system when in a morbid state. But a doctrine like that of homœopathy, which tells us that diseases are caused by the same remedy which cures them, and that the efficacy of a medicine is in the inverse proportion to its dose; and which then builds upon this sandy foundation a superstructure which has no sort of relation to it, and, indeed, overwhelms it—such a doctrine, we say, it is idle waste of time to attempt seriously to controvert. But as there are, no doubt, some conscientious persons who are anxious to know the merits of a system which finds at present so many advocates, and as the silence of the respectable members of the profession on the subject might be construed into an acquiescence with its dogmas, we are not sorry that Mr. Brodribb has favoured the profession and the public with the pamphlet now before us. We may remark, that he has treated the subject with remarkable calmness and perspicuity; and unless the persons who subscribe to the homœopathic doctrines have entirely taken leave of their senses, we think they cannot fail to be convinced by Mr. Brodribb's clear and luminous mode of argument.

The worst feature in the homœopathic quackery is the enormous amount of duplicity and prevarication with which it is mingled, and of which the late cases of Mr. Hayle, who graduated at St. Andrew's, and of Mr. Pope, who attempted to graduate at Edinburgh, are flagrant instances. We feel a sentiment of pity for the imbecility which leads even clever men to make mistakes in doctrine and practice: but we have no compassion for those who know what is right, and pursue what is wrong.

The London and Provincial Medical Directory. London: 1851.

This work is worthy of much commendation, for the amount of information which it supplies, and also for the general accuracy of that information. It ought, however, to be called "The Medical and Quack Directory": for we find Hahnemann Hospitals, Hahnemann Medical Societies, and lists of homœopaths and hydropaths set forth, as if the profession looked on them as portions of the medical commonweal: as if medical men and quacks had an equal claim to the confidence of the public. We beg to tell the conductors of this work, that they have, in their last edition, perpetrated—inadvertently, we believe—an insult upon the medical profession—and that it must not be repeated. The first offence may be excused; but if the *Directory* for 1852 be not expurgated of the names of the notorious charlatans to whom we have alluded, and who are now formally repudiated by the Scottish Colleges, and by the unanimous vote of the most influential and most numerous association of medical men in England, the profession will deal with the editors as deliberate transgressors.

We refrain from farther remarks at present: and we trust that when the volume for next year issues from the press, we may be able to bestow on it an unmingled meed of praise. In the mean time, we advise our readers not to order the work till the editors have given an assurance of its being, as its name implies, only a "*Medical* Directory".

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

ANATOMY AND PHYSIOLOGY.

SUPERNUMERARY FIMBRIATED OPENINGS IN THE FALLOPIAN TUBE.

M. A. Richard, Junior, in making examinations of the Fallopian tubes, has discovered the occasional presence of supernumerary fimbriated extremities in these organs. He found them in five subjects out of thirty. The normal extremity existed in all the cases. Below this, at a distance of from some millimètres to two or three centimètres, there was a second orifice, furnished with fringes like those of the normal opening. A wire could always be passed through the fimbriated extremity, so that a communication between the interior of the tube and the peritoneal cavity could be made out. By gently pushing the wire towards the abdominal or the uterine orifice, it passed either through the true fimbriated opening, or into the uterus.

Of the five subjects, one was a fœtus at the full period, presenting two supernumerary orifices ; another was a girl, aged 15, who had not menstruated—she also had two additional orifices ; the other three were adult women, who each presented one supernumerary opening.

M. Richard hints that this structure may throw some light on the cause of the abdominal variety of extra-uterine pregnancy. [*Reports of Biological Society of Paris*, in *Gazette Médicale*, June 28, 1851.]

PRACTICE OF MEDICINE AND PATHOLOGY.

CONGENITAL SYPHILIS.

The transmission of Syphilis from the parent to the offspring has of late excited much attention, and especially has been made the subject of an animated discussion in the French Academy of Medicine. The articles which we propose to bring under the notice of our readers are—

I. A memoir on Syphilis in Children, by Dr. Deutsch, of Nicolai in Upper Silesia, published in the *Journal für Kinderkrankheiten* for March and April 1851.

II. Discussion in the Académie de Médecine in Paris, between MM. Cazeaux, Paul Dubois, Ricord, Gibert, etc. Vide *Gazette Médicale de Paris*, June 21, July 5, 12, and 19 : also a case related to the Académie by M. Depaul, published in the *Gazette Médicale* for July 26.

Dr. Deutsch's Memoir. It is well settled that syphilis can be communicated to a fœtus by its parents : experience has proved it, and has controverted the opinions of those who have asserted the contrary. It is beyond doubt, that the child of a woman suffering from constitutional syphilis comes into the world with evident syphilitic symptoms, or exhibits the trace of the mother's disease in its weak, sickly development. But it is not so clearly established that a child begotten by a syphilitic father will, when born, show such marks of disease, unless the mother have been also affected : experience seems to have only pointed out that, as a consequence of syphilis in the father, the child will be born with a depraved constitutional habit, generally in the form of scrofula or rickets. Notwithstanding that the subject has occupied much of the attention of physicians, several questions still remain obscure : these are,—1. How is it to be explained, that syphilis does not always pass from the parent to the child—that, indeed, instances of this are not very rare ? 2. How is syphilis communicated by the father to the child, without the intervention of syphilitic affection in the mother ? 3. Is it

established by experience, that miscarriages very frequently result from syphilis in the parents, and that the fœtus is then usually born in a putrid condition ; many physicians have made the observation, that such abortions more frequently follow when the father than when the mother is affected ;—is this really the case, and, if so, how is it to be explained ? 4. Why are the symptoms in new-born children much more rarely those of primary than of secondary or tertiary syphilis ?

1. The first question is difficult to be answered : for gouty, hepatic, scorbutic, or carcinomatous parents sometimes produce perfectly healthy children. We can only imagine that the father has been temporarily healthy, especially at the time of procreation ; and that the diseased state of the mother has been interrupted during the period of pregnancy, as is sometimes the case in pulmonary consumption.

2. The second question is sufficiently explained by the fact, that, for the infection of the embryo, it is sufficient that the male fluid be impregnated with the poison, while the mother may escape infection,—the more easily, the less opportunity there is of coming into contact with syphilitic eruptions.

3. It is uncertain whether the fact stated in the third question—that syphilis in the father is more liable to produce abortion than in the mother, is correct. The English surgeons believe this to be the case ; the French, and among them Ricord, contradict it. It may be, that diseased semen, from a syphilitic father, may produce a diseased germ, incapable of coming to maturity ; and that the death of the embryo may thus be produced more readily than when a syphilitic mother has to supply nourishment to an otherwise healthy germ. This view is confirmed by the fact, that men, who have at an earlier period suffered from syphilis, but have been apparently cured, produce syphilitic children far more frequently than women who have been in the same circumstances. Prostitutes, who have often gone through the whole series of venereal affections, are, when healed, more frequently the mothers of sound children, than men are the fathers under the same conditions.

4. With regard to the fourth question, we must remember that primary syphilis is not so rare in new-born children as is generally supposed. Many forms are not recognised as primary, because they appear on unusual parts of the body, as the umbilicus, mouth, and eyes. A primary syphilitic affection can, however, perhaps only arise in new-born children in its passage through the organs of a diseased mother, or from contact with venereal eruptions in the mother, nurse, midwife, or other persons. It will then not be so likely to appear on the genital organs, as wherever contact has taken place ; and especially so, the more ready the child's skin, particularly on certain parts of the body, is for infection.

Secondary Symptoms in New-born Children. The forms under which secondary syphilis appears in children, are mostly impetiginous spots, from the size of a pea to that of a silver *sechser*, of a dirty copper-colour, apparently, but not really, raised above the skin, and unchanged both in a cold and in a warm temperature. Their principal seat is the inner and back of the upper part of the thigh ; they may also occur at the lower part of the thigh, in the vicinity of the joints, on the glutæal region, the face, the hypogastric region, and other parts of the body. Sometimes a desquamation of the epidermis, as in herpes furfuraceus, takes place at their circumference. More rarely there is a formation of bullæ, and this occurs in two forms. Sometimes the bullæ are like those of pemphigus ; they are of the size of a pea, bean, or hazel-nut, and filled with a clear lymph : they easily flatten, and change into large superficial ichorous sores, with ragged edges, having a tendency to spread. The other form is more pustular, very like itch, but the pustules are filled with a much clearer and more transparent reddish pus. The pustules dry on their surface, and form a rough brownish scab ; and beneath them is formed an ichorous ulcer, which penetrates deeply. One or both of

these forms may be accompanied by non-eruptive skin affections, especially by erysipelatous redness and tension, principally in the loins, buttocks, and genital organs, differing, however, from true erysipelas in being painless, and in the permanence of the colour on pressure. Sometimes this pseudo-erysipelas appears on the soles of the feet. There are, moreover, boils of various size and irregular shape, of a doughy feel, painless, covered with unchanged epidermis, and which frequently, after they have long remained of the same size and shape, spread laterally, without being disposed to burst.

Impetiginous syphilitic affections are more rare. They occur especially in the form of verrucæ, closely resembling true pocks just before suppuration, in their size, form, contents, and areola; they are especially numerous on the upper part of the body, principally the neck. In their further course, they pass into purulent and exulcerating pustules.

An old wrinkled face, dull weeping eyes, a flabby, miscoloured, cold skin, desquamation of the epidermis, obstinate intertrigo in the upper part of the thighs, in the axilla, in the neck, and behind the ears, obstinate coryza and stuffing of the nose, panaris and paronychia, and ulceration of the angles of the mouth, are usually the concomitants and the confirmatory symptoms of the syphilitic manifestations described above. Extremely rarely there occur chancre-like, round, fatty ulcers on the genital organs, the anus, the mouth, and the orifice of the nares. Still more rarely, condylomata are found. Mauthner (*Journ. für Kinderkrank.*, Bd. xv, Heft 1 and 2) says, they are not flat before the second year, nor pointed before the seventh. The same writer states that syphilitic diseases of the joints do not occur before the seventh year; I have not yet observed such affections in children.

Syphilitic ophthalmic affections occur in two principal forms:—1. As blennorrhœa, perfectly like the disease known as *ophthalmia neonatorum*, but far more rapid in its course and dangerous to the eyes. 2. Psoriasis of the eyelids, with tylosis and rapid induration of the mucous glandules.

This seems to us to be the proper place to introduce such parts of the discussion in the Academy of Medicine as related to certain alleged symptoms of syphilis in children.

The first object that claims attention is the *change in the lungs*, alleged by M. Depaul, in his memoir presented to the Academy, to result from syphilis; which memoir was the original cause of the discussion. M. Depaul described in his memoir, the purulent collections found in the lungs of infants who are born dead, or who die soon after birth, as indicative of syphilis. This alteration has been already pointed out by several observers, as Baron, Billard, Husson, Sestier, and Cruveilhier. Some of them thought that the collections consisted of softened and suppurating tubercles; others, that they were abscesses resulting from circumscribed inflammation: but no one, before M. Depaul, had ascribed them to congenital syphilis. He has observed them about fifteen times: he cited two cases. In the first case, the mother offered no trace of syphilis at her delivery, but M. Depaul found that she had previously had a chancre, and that she had been treated in a venereal hospital. The infant died some instants after birth. It had bullæ of pemphigus in the plantar and palmar regions; the thymus body was a little larger than usual, and had in each lobe a small cavity, filled with a grumous, yellowish, thick matter. At the apex of the left lung, there was a projection externally, of the size of a small nut, and of a yellowish tint. It was not softened in the centre. In the other case, the state of the lungs showed that the infant had breathed very imperfectly for twenty minutes after birth. The parts into which air had not entered appeared as irregular masses, of various sizes. The upper lobe of each lung contained a mass of the size of a large nut; and smaller ones were scattered throughout the other lobes. On incision, they were found to be formed of a yellowish compact tissue, with a cavity in the centre, containing a yellowish sero-purulent liquid, which, both to the eye and under the microscope, presented

the characters of pus. The thymus body contained a small quantity of pus in each lobe ; and there were a considerable number of bullæ of pemphigus on the hands and feet. The mother of this child said that she had never had syphilis, nor could any traces of it be detected in her. The father had, however, two months before the commencement of his wife's pregnancy, contracted an indurated chancre, which had been merely treated by emollients and slight cauterisation. He had subsequently had secondary symptoms.

This affection of the lungs, according to M. Depaul, rarely exists alone, but is generally accompanied by other manifestations of syphilis, as pemphigus, purulent collections in the thymus, or enlargement of the liver. He believed that this affection of the lungs must be added to those signs which are considered indicatory of congenital syphilis.

M. Cazeaux, who reported on the memoir of M. Depaul, doubted the constant venereal origin of the purulent collections in the lungs. The questions to be determined were:—1. Whether the presence of pus could be explained in any other way ; and, 2. Whether M. Depaul had logically demonstrated its syphilitic origin ? He (M. Cazeaux) believed that these abscesses might arise from common circumscribed or lobular pneumonia, without having a syphilitic origin.

M. Ricord said, there was no doubt that syphilis could produce pulmonary lesions. The ancient writers—and especially Lieutand—were aware of this. He had seen changes in the lung perfectly analogous to those recorded by M. Depaul, and which could not be referred to true tubercles, nor to simple pneumonia, nor to metastatic abscesses, nor to resorptive fevers. They were, on the contrary, closely connected and of simultaneous occurrence with other well-marked symptoms of syphilis, such as deep tuberculisations in the cutaneous tissue, gummy tumours of the cellular tissue, diseases of the fibrous and osseous tissues, etc. Opportunities of making autopsies have rarely been afforded ; but M. Ricord had observed some patients, presenting indubitable symptoms of tertiary syphilis, who had all the symptoms of pulmonary phthisis, except tuberculous expectoration, and who recovered from this under antisyphilitic treatment.

M. Paul Dubois supported the views of MM. Depaul and Ricord.

The subject of *pemphigus* also excited considerable discussion.

M. Depaul stated in support of his opinion, that the purulent deposits in the lungs are venereal, that he found them to coexist with pemphigus, purulent collections in the thymus, or enlarged liver; which he considered as manifestations of syphilis. This opinion was contested by M. Cazeaux, who doubted the constant specific origin of these affections. In this he was supported by M. Gibert, who observed that "in the child, the most usual manifestations of syphilis were varioliform pustular eruptions, and varicelliform vesicular eruptions, or mucous papulæ or flat tubercles. He had not observed a true pemphigoid affection either in the child or in the adult. True *dartres*—humid and scaly or scabby eruptions of eczema and impetigo—were not among the manifestation of syphilis."

M. Ricord expressed his belief that any organ of the body may be affected by syphilis, though some have a greater resistant power than others. All cutaneous affections, he thought, have their syphilitic representatives ; and he saw no reason for supposing pemphigus to be an exception to the general rule. "If syphilis, in producing its constitutional effects, acts in the same way as other common causes tending to the same results ; and if pemphigus often arise from bad hygienic conditions, such as unhealthy habitations, bad or insufficient food, etc., may it not be developed in the same manner in the fœtus ? Is not a syphilitic mother, in fact, an unhealthy habitation ; and does she not furnish bad material for nutrition ?" M. Ricord long hesitated to admit syphilitic pemphigus ; but he says he was convinced of its existence by two cases, in which pemphigus appeared in syphilitic patients in

common with other symptoms, and was affected, as to increase or decrease, in the same way as they were.

M. Paul Dubois also believed firmly in the existence of syphilitic pemphigus. The following description of the affection was given by him in the course of the discussion in the Academy.

"Syphilitic pemphigus is characterized by vesicles, generally voluminous and closely placed: they are almost always filled with a strongly yellow pus. They are most developed on the palms of the hands and soles of the feet; they rest on the skin, the violet or blue tint of which contrasts with the rosaceous colour of the surrounding part. In these situations, the vesicles are generally so close that they touch, and seem to be joined at some part of the base. The vesicles on the other parts of the body are commonly more separate and smaller; and the skin on which they rest does not present the violet or blue tint in so high a degree; and this tint is even mostly absent on the trunk. Syphilitic pemphigus generally appears before birth; so that there may be seen, as soon as the child is born, some vesicles already empty, while others are just commencing, and others again fully developed. The bottom of the opened vesicles is formed of a red dermis, sometimes sound, sometimes superficially eroded; in a smaller number more deeply so. In the latter case, the borders of the wound are sometimes a little raised and rounded, and there is at various points an appearance of the later stages of ecthyma. This eruption most frequently exists in well-developed infants, in whom nutrition has been quite normally performed up to the moment of their birth. In all the cases where pemphigus has distinctly presented the characters which I have pointed out, the children have died in a few days. The alteration in their health has been so profound and rapid, notwithstanding the care bestowed on them and the precautions taken, that it has been most frequently impossible to attribute their death to any other cause than their syphilitic affection.

"Such are, in my opinion, the characters of the pemphigus of new-born children. I do not consider, as a manifestation of syphilis, a few vesicles, appearing after birth in feeble children, commonly scattered over the trunk, without any alteration of the skin beyond a slightly rose-coloured areola, and disappearing spontaneously in a few days. Krauss was therefore wrong in confounding together, under the title of pemphigus of new-born children, the simple and the syphilitic forms; and it is probably due to the influence of the ideas contained in his work, that the syphilitic characters of pemphigus have been so long misunderstood.

"In most of the cases which I have observed, I have been able to determine old traces of syphilis in the parent, or have obtained confirmatory information from them. When I have not succeeded, it has almost always been in the absence of the father. A remarkable fact was shewn by me to the late M. Cullerier, junior. He had requested me to shew him an infant affected with pemphigus, as he had not seen a case. An occasion soon offering itself, I showed him a child, born alive, perfectly developed, and covered with bullæ of pemphigus. The mother also presented too evident traces of an unhealed old venereal affection, which had just destroyed a part of the nasal bones, producing the characteristic deformity.

"In one of the first infants which I saw affected with pemphigus, and who died almost immediately after birth, there was a shallow elliptical ulceration, covered with concrete pus, on the left anterior pillar of the velum palati. Behind, on the corresponding part of the mucous membrane of the pharynx, there was a deeper patch of ulceration, covered with a layer of partly dried pus. In another child, covered with bullæ of pemphigus, the left ala of the nose, with the upper lip, presented a deep erosion of the skin, covered by a tolerably thick crust: it was evidently the excavated base of a bulla of pemphigus, or rather of a pustule of ecthyma mixed with the prevailing eruption. There was also a superficial ulceration on a neighbouring part of the

pituitary membrane ; and another had completely perforated the nasal septum. These lesions were observed immediately after birth.

"About twelve years ago, I attended a young woman whose husband, having at the time primary syphilis, was imprudent enough to cohabit with her ; he also neglected to employ effectual curative treatment. After some months, secondary symptoms appeared in both. The young woman became pregnant, and was delivered, at four and a half months, of a fœtus which appeared to have been dead some days. I called M. Chomel in consultation ; and we agreed that both the man and his wife ought to be put under anti-syphilitic treatment. It had been followed rather irregularly for three months, when a second pregnancy supervened. The child was unexpectedly born a short time before full term : it was dead, and covered with pemphigus. Becoming pregnant a third time, the young woman consulted M. Moreau. The child was born alive, and apparently well, at the full term ; but, in about a fortnight or three weeks, a syphilitic eruption appeared. By the advice of MM. Moreau and Baron, it was put under a course of antisyphilitic medicines, and recovered." M. Dubois then went on to controvert the opinion of M. Cazeaux with regard to pemphigus.

M. Cazeaux, in replying to M. P. Dubois, observed that it is not new to attribute pemphigus to syphilis ; and that neither the erosion of the dermis, nor the seat of the disease on the hands and feet, were proofs of the venereal origin of the affection. The characters of the disease, as given by M. Dubois, would also answer for chronic pemphigus. In the cases cited, M. Cazeaux was inclined to believe that, considering the rarity of the occurrence, pemphigus appeared in the children "*although* they had syphilis, not *because* they were so infected."

M. Danyau had seen many children born with pemphigus. Many of them were the offspring of syphilitic parents ; of the rest, nothing definite could be ascertained. He would not therefore absolutely allege that pemphigus was a constant sign of syphilis ; but he was much inclined to believe, with M. Dubois, in its syphilitic origin.

At the meeting of the Academy of Medicine on July 22, 1851, M. Depaul related a case, of which the following is an abstract.

Case. G., aged 24, was admitted into the obstetric ward of the Clinique on August 2, 1850. She had been of good health, and had lived in Paris three years. Soon after her arrival, she became pregnant by an apparently healthy man, and was delivered of a dead child at the eighth month. She again became pregnant by another man, who appeared quite sound ; and, in about two months, she had a sore in the labia majora, which was treated as a chancre by cauterisation, and was apparently cured. Three months after, however, she felt something unusual about the anus and vulva ; and, on being examined at her delivery, she presented patches round the anus and on the external genital organs, of a syphilitic character.

The child was small, apparently of eight months' growth. Nothing was discovered on the skin but a well marked violet tint on the palmar and plantar regions. For two days, the infant took the breast readily, and otherwise appeared well, except that the respiration seemed rather imperfect and hurried. Forty-eight hours after birth, there appeared on the palms and soles a pretty large number of circular vesicles, varying from the size of a hemp-seed to that of a large lentil-seed, and all filled with a cloudy milky serosity. From this time, the countenance of the child was expressive of suffering. Several of the bullæ were torn by rubbing against the clothes, and yielded a slight sanguineous exudation. The infant cried constantly, and refused the breast. On the fifth day, there appeared, in the vicinity of the mouth and nares, several groups of small vesicles with a transparent apex and a conspicuous copper-coloured base. About the genital organs there also appeared mucous patches of a decidedly venereal character. On the next and following days, the patches of eczema became converted into blackish scabs ; some of them ex-

tended into the nostrils, and greatly impeded respiration. Deep clefts formed on the lips, especially at the commissures.

M. Depaul administered mercury to the infant; and it appeared to go on satisfactorily for a fortnight. At the end of this time, the respiration became impeded; and, in spite of blisters and other remedies, the child died the next day.

On *post-mortem examination*, the mouth, nose, and genital organs appeared to have been getting well. The lungs were bound here and there to the walls of the chest, by false membranes, evidently formed anterior to birth. Each lung contained some small indurated nuclei, none being larger than a pea. Their consistence was that of the liver; their colour a deep red. One alone, which projected slightly under the pleura, was less coloured, and contained pus. All the other parts of the lung were sound, and had been entered by air. The other organs were healthy.

Primary Syphilis in Children. On this subject, Dr. Deutsch writes as follows:

Primary syphilis in children only differs from that in adults, by the unfrequency of chancre on the genital organs. Yet I have had an opportunity of seeing several children at the same time affected in this way. They were the sons of Jewish parents; and the disease was produced in them by the person who circumcised them being syphilitic, and sucking, according to custom, the wound with his mouth. Certain parts of the circumcised prepuce assumed a red, swollen, inflamed appearance; and ulcers were developed, but the gland and body of the penis remained free. In almost every case, there were also buboes. On another occasion, I saw perfectly similar ulcers and buboes on some Jewish children, and was enabled to refer them to precisely the same immediate cause as the others. It appeared, however, on the one hand, that these ulcers not only resisted antisyphilitic medicines, but even became worse; and, on the other hand, that no trace of syphilis could be detected in the operator, and that his past and present life would not lead to the suspicion that he had it: his gums were, however, spongy and scorbutic.

Syphilitic ulcers on the lips, tongue, anus, and once on the umbilicus, have come under my notice: but never without direct infection from the mother, midwife, nurse, or some other person. In all such cases, there were also buboes in the inguinal glands.

Weisse (*Abhandlungen der Petersb. Aerzte*, 1842, pp. 240 and 304) appears to have seen some peculiar alterations in the tongues of syphilitic children, in the form of furrows, and even rhagades.

Ulcers, having a strong resemblance to chancre, are sometimes found in female children from four to eight years of age, as a consequence of ascarides. They are principally developed on the internal labia, also in the anal region; and give rise to a profuse discharge of purulent corroding mucus. In a case which I observed, the entrance of the vagina, the external organs of generation and the upper part of the inner surface of the thigh, as well as the perinæum, were ulcerated throughout. Every antisyphilitic remedy, whether external or internal, aggravated the disease; but it was soon subdued by frequent cleansing and washing with weak solution of chloride of lime, and by fomentations of sage and nut leaves.

Treatment. In treating syphilis in children, a distinction must be made between the primary and the secondary affection. Mercury is undeniably the principal remedy: but there is a difference of opinion as to, 1. Whether it is judicious to use it only externally or internally, or in both ways at once; and 2. Whether it is always necessary to give the children mercury, or whether it is sufficient that the mother or nurse who suckles the child use it. Without doubting that cures have been brought about by the internal use of calomel and Hahnemann's mercury, I must mention the fact, that these remedies are not certainly sufficient in secondary symptoms; and

that, in primary cases, they are more likely to injure the children, than the external use of mercurial ointment (applied round the knee on a piece of flannel, according to Sir B. Brodie's plan). I have employed Cyrillo's treatment with very happy results in several rather extensive cases of secondary syphilis. Six grains of sublimate, and the same quantity of sal-ammoniac, are made into an ointment with two drachms of lard; and a piece of the size of a pea is rubbed nightly on the soles of the feet. Cyrillo recommended the soles of the feet to be softened by means of warm water for some days beforchand; but this is unnecessary in very young children. Twenty such inunctions are sufficient for a cure. The mother or nurse of the child must at the same time be put on low diet, and use blood-depuratory drinks. Many English and American physicians (especially Samuel Cooper, Golding Bird, Cheesborough, etc.), extol the hydrargyrum cum cretâ, given in doses of one or two grains, twice or thrice a day.

Weisse recommends Zittmann's decoction, with red oxide of mercury and sulphureous baths. Nonat gives corrosive sublimate to children of a month old; from one-sixth to one-eighth of a grain is dissolved in an ounce of water, and a teaspoonful given once daily; the mother or nurse being at the same time put under an antisyphilitic course. In obstinate forms of secondary lues, the principal remedy is biniodide of mercury, rubbed up, according to Cazenave's prescription, with some gum and honey or syrup, and either given from a spoon, or rubbed gently on the tongue and gums. It is also the chief remedy in tertiary syphilis in children, especially for affections of the bones, venereal coryza, etc. Iodine alone, notwithstanding its recognised beneficial effects in the lues of adults, does not cure it in children. Bathing of the surface, and careful cleansing of the diseased parts, especially if they secrete much, must never be neglected. If diarrhœa be produced by the mercury,—a troublesome, but fortunately rare occurrence,—opium must be given; but it is generally sufficient to rub it into the hypogastrium. I have not observed salivation in children under seven years of age. About a fortnight or three weeks after the cure is completed, I have found it useful to employ baths of sulphuret of potassium—half an ounce in each bath. The children begin to gain flesh in a remarkable manner, and get a blooming appearance. I have not observed that constitutional diseases of any kind remain after syphilis has been cured. Syphilis undermines the constitution much less readily in children than in adults, probably on account of the greater ease with which antisyphilitic treatment can be properly applied in the former. Whether children are cured by subjecting the wet-nurse or mother alone to antisyphilitic treatment, I cannot say from my own experience. That such is the case, is affirmed; and physiological reasons are not wanting to support it. But a certain result seems scarcely to be expected; and, as the disease is one which requires a prompt and sure removal, and as direct treatment of the child fulfils the indication, it is not advisable to employ an indirect method of somewhat doubtful advantage, especially on account of the unavoidable influence which the treatment must have on the health of the mother.

It is still a disputed question, whether a pregnant woman should be put under an antisyphilitic course for the preservation of her child. Not a few oppose this plan, alleging that the treatment fails in producing the desired results, and that it causes abortion. The first of these reasons is sufficiently controverted by careful experience; and the second is doubtful, for, where abortion occurs under such circumstances, it cannot be determined whether it was due to the disease, or the treatment. We must, however, always bear in mind to use the mildest preparations possible, as the oxides, when we give mercury to a pregnant woman. Iodine is objectionable.

I may now be allowed to relate a few cases, which have occurred under my own notice.

Case I. A young, strong, unmarried woman, was delivered at the full period of a well-formed healthy male child. Another child was discovered to be in the uterus; and, as the labour-pains had in the mean time ceased, the membranes were ruptured, and, by means of turning, a dead fœtus, eleven inches long, already commencing to putrefy, was brought into the world. It was ascertained, that the woman had never had syphilis during her pregnancy or previously, but that she had led a loose life, and had had intercourse with several syphilitic men. There was a probability of superfœtation having occurred in this case. The other child remained well, and shewed no traces of disease.

Case II. A woman was infected with syphilis by her husband, during her pregnancy. The man had had syphilitic ulcers on the genital organs, and buboes; and, at a later period, ulcers on the throat and mouth, and *corona venerea*. The woman had ulcers on the genitals, condylomata, ulcerated throat and *corona venerea*. Both were treated by several physicians with various preparations of mercury and with iodine; they had, however, not attended carefully to the treatment, and the woman especially had been constantly exposed, during the use of the remedies, to the influence of very cold spring weather. At the termination of pregnancy, however, she had no more traces of syphilis. The child was small, poor, weak, and ill-nourished; it had numerous venereal spots, of a copper colour, with branny desquamation, on the outside and inside of the upper part of the thigh, on the forehead, and in the vicinity of the bones of the foot. A perfect cure was obtained in three weeks, by means of Cyrillo's remedy and baths of bran.

Case III. A married pair, both of whom had suffered from all forms of syphilis, which still had left traces on the skull and sternum, had three children in five years. All three came into the world at the full time, but were all extremely small and weak. The first suffered from ophthalmia, which was not recognised as syphilitic, and yielded to simple cleansing remedies, without the use of mercury; the child, however, was slow in growing, and remained weak. The second was born with furunculi of a red-brown colour, and of the size of a walnut; these suppurated and healed up, but fresh ones constantly formed between them, and were at last replaced by purulent boils of large extent, which yielded a quantity of ichorous pus. Antisyphilitic medicines were not used in this case: but the child was treated with great care and cleanliness. It became atrophied, and died when ten months old. The third child was born with pustules over the greatest part of the body. Some of them were like itch pustules; they dried into a brown scurf, and left deep ulcers beneath. The child had also snuffling breath and coryza. Cyrillo's treatment was used with some success; but the child remained weak, frequently suffered from diarrhœa, and at last became ricketty.

Case IV. A weakly female, whose husband had had syphilis several times before marriage, but had always been treated by rational remedies, was delivered of a small child (thirteen inches long), which was in other respects well formed, and not badly nourished. The woman had never had syphilis. The child had three bullæ of pemphigus; and also had, on several parts of its body, large, brown, dry, leathery spots, the remains of flattened and healed bullæ of pemphigus. In three weeks, more bullæ appeared. Antisyphilitic remedies were not employed; the child wasted away, had diarrhœa, and died in the fourth week. After a second pregnancy, the woman was delivered of a small child, well formed and nourished. On the fifth day, pemphigus appeared; but the bladders seemed smaller than in the other case. The child had one-sixteenth of a grain of calomel given twice a day, and the mother was put on a course of sarsaparilla and dulcamara. The pemphigus disappeared in fourteen days, and was not followed by any other cutaneous affection. The child throve regularly, reached the age of thirteen months, and died in consequence of irregularities in diet after weaning.

Case V. A child, whose father and mother had suffered for some years

from virulent gonorrhœa, was seized, on the fifth day after birth, with inflammation and swelling of the eyelids. This rapidly passed into profuse blennorrhœa; and the eyelids exhibited the velvety excrescences peculiar to *ophthalmia neonatorum*. In other respects, the child was free from any appearance of disease, especially from impetiginous eruptions; and this latter circumstance prevented the syphilitic nature of the affection from being recognised. But, notwithstanding the greatest care, intertrigo appeared between the upper parts of the thighs and the genital organs, behind the ears, on the neck, and in the axillæ; it spread with extraordinary rapidity. The excoriations produced by the intertrigo assumed, in spots, the appearance of exulcerated, broad, flat, irregular sores. The ophthalmia was treated with a lotion of nitrate of silver (one grain to eight ounces of solution of opium); the intertrigo was treated by water; and calomel with magnesia were given internally. The child recovered in seventeen days, and afterwards throve well.

Case vi. A woman had had, for seven or eight weeks, chancres on the external genital organs and vagina, as well as condylomata of the arms and perinæum. The external and internal genitals, and the neighbouring parts, being well anointed with lard to prevent infection, she was delivered of a perfectly healthy and well-nourished child, which remained well, but was fed by hand. When the mother had been cured by appropriate treatment, she gave the child the breast; and it remained well as before.

Case vii. A woman, whose husband had had primary, secondary, and tertiary syphilis, before marriage, but had not since manifested any appearances of it, aborted five times successively in the fourth month of pregnancy: the fœtus was always in a putrefied state. In her sixth pregnancy, she went to the full period, and was delivered of a very small, meagre child, free from any appearance of impetigo: it died on the third day. In the mean time, her husband had, under medical advice, used each summer the warm sulphur baths at Salzbrunn. In her seventh pregnancy, she not only reached the full period, but was delivered of a healthy, strong child, which seemed likely to do well. This case corresponds with another, in which a woman, whose husband was syphilitic, had been delivered several times of weakly children, who died early, and had also aborted several times. When married a second time, to a healthy husband, she had no more abortions, and bore healthy children.

Case viii. Two women and a girl, who had several times had syphilis from irregular intercourse, were cured by methodical treatment. They married healthy husbands, and brought sound children into the world.

Case ix. In the village of G., there were thirty-two persons who had lues. Among these, were seven men and their wives: two of the latter were pregnant, and three were suckling their children. All these women soon had secondary symptoms, partly in the form of ulcers in the throat, and partly in the form of impetigo. The children were infected, and had syphilitic ulcers on the lips and tongue. They and their mothers were treated by mercurial inunction, and recovered. The pregnant women underwent the same treatment, and were cured: they went on regularly, and were delivered of well-developed children, who, however, had syphilitic spots. These were removed by Cyrillo's treatment. An unmarried pregnant woman, who had syphilis, rubbed in mercurial ointment; but she aborted in the sixth month. A very scanty diet and irregular mode of living, as well as frequent mental trouble, may have in this case favoured the occurrence of abortion.

Case x. The children above referred to, as having been infected with syphilis during circumcision, had all enjoyed perfect health up to that time. The wounds made in operating formed red, painful, inflamed cicatrices, which became fissured, and formed chancres. Where there were several of these scars close together, the ulcers became confluent. Buboes also ap-

peared—in some cases, even before the chancres. The general health of the children was much disturbed. Calomel and magnesia were given; and *unguentum cinereum* was applied to the buboes. All the patients recovered without any farther symptoms. In the other children, who had pseudo-syphilitic ulcers and buboes after circumcision, the disease was aggravated by mercurial treatment: they were cured by simply applying a digestive ointment to the ulcers.

The subject of the treatment of congenital syphilis was also brought under notice in the discussion at the Academy of Medicine.

M. Depaul stated, as one of the conclusions to his memoir, "that a physician should think himself authorised to prescribe antisyphilitic treatment to a father or mother, even when it is not possible to find traces of the disease in them, but when a child has been born dead, with the lungs in the state described by him."

MM. Cazeaux, Gibert, and Roux, opposed the practice of treating for *latent* syphilis.

M. Moreau had, some years ago, had an officer of the *garde royale* under his care, who had had syphilis. This officer was married: his wife became pregnant, and was delivered of a dead child; this occurred three times in succession. M. Moreau then advised the officer to put himself under a course of antivenereal medicines. The wife again became pregnant, and was delivered of a living, healthy child; and all her children have since lived.

M. Danyau related the case of a lady, who aborted in her first pregnancy, and in the next was delivered of a dead putrid child. He suspected syphilis, principally because the husband had already been affected, though he believed himself now cured. M. Danyau's proposition of an antivenereal course of treatment was rejected; and he had since heard that the lady had given birth to two other children affected with syphilis, of which they died.

M. Ricord observed: "It has been said that antivenereal treatment only has an influence on the evident symptoms; and that it is useless to have recourse to it when these do not exist. And hence it has been asserted, that it is useless to prescribe such treatment for a man or woman, when, being under the influence of the diathesis, though presenting no evident symptoms, they have become the parents of an infected child. But I think that the supporters of this view have forgotten, that the birth of a child with constitutional syphilis is a true manifestation of the existence of the disease in the parents. On the other hand, I am convinced that no one should be satisfied with the mere disappearance of the symptoms under treatment. Can we believe that a patient is thoroughly healed, when the *syphilide* has disappeared in a week? Daily experience has taught us that, though we do not know the quantity of mercury absolutely required to cure a case of lues, we know at least that the longer the treatment is continued in proper proportions, the more certain is the cure. If it does not destroy the diathesis, it prevents, or at least retards, its manifestation for a longer or shorter period. We have seen many cases of parents, who, having been put under a regular course of treatment, had afterwards healthy children; whereas their offspring had previously died before birth, or had shewn symptoms of syphilis soon after birth. And, if the treatment was suspended, the children born were infected. I have always, in these inquiries, examined more particularly into the state of the mother. Paternity may be doubtful; but not maternity. Some persons have hence thought, that I only admit hereditary transmission through the mother: this is incorrect; I only assert that the hereditary influence is here incontestable.

"It would never be right, on account of doubtful syphilitic symptoms in an infant, or on account of doubtful previous symptoms in the parents, to make the latter undergo a troublesome course of treatment, or to do what I have sometimes seen done—to put the father under an antivenereal course, when he perhaps has had a most harmless gonorrhœa twenty years before."

PARTIAL DILATATION AND RUPTURE OF THE LEFT VENTRICLE OF THE HEART: ATTEMPTS AT REPARATION BY COAGULA AND LYMPH.

Dr. M. M. White, of Syracuse, U.S., relates, in the *Boston Medical and Surgical Journal* for March 26, 1851, a case illustrative of the efforts sometimes made by nature to repair injuries of important organs.

The patient was a gentleman, aged 70 years, to whom Dr. White was called on October 5, 1850. Eleven days previously, he had been seized with urgent symptoms of angina pectoris; these lasted for one hour, and did not recur: but considerable tenderness, fulness, and uneasiness, remained about the region of the heart, with inability to lie on the left side. A slight pain was occasionally felt, and continued to recur until the first visit. At this time Dr. White found he had partially fainted, and was slightly convulsed, with momentary loss of consciousness. The impulse of the heart was very feeble; the pulse slow, small, and intermittent; there was great prostration of the vital powers; the countenance was pale and sunken; the extremities were cold; he had profuse perspiration, with difficult and laborious respiration. The violence and urgency of these symptoms subsided in the course of an hour or two; the pulse became regular, yet rose to 130 beats per minute in the course of the day.

On the ensuing day, October 6, he was much better.

He was visited daily until the 14th, during which time the pain and uneasiness about the heart had almost entirely subsided; but the frequency of the pulse continued, varying from 120 to 125 per minute. His general health had so much improved, that he resumed his business at his office. Dr. White did not see him again until Thursday morning, October 24th, when he was called in great haste. The patient was labouring under a severe paroxysm of palpitation of the heart, with a frequent, small, feeble pulse, nearly imperceptible at the wrist; countenance pale and sunken; respiration laborious; dry hacking cough; hoarseness of voice; profuse sweating, and cold extremities; with rapid sinking of the powers of life, threatening immediate dissolution. These symptoms continued most of the day. His appetite now for the first time failed, and there was nausea, with occasional vomiting; flatulence and constipation of the bowels were also present.

Paroxysms of palpitation of the heart, with sinking of the vital powers, continued to recur at irregular intervals for seven or eight days, though with less and less severity, until they nearly ceased, three or four days previous to death. As the paroxysms of palpitation and sinking gradually declined, the action of the heart became more regular. The pulse also became slower, fuller, and more regular. The muscular power gradually improved, so that he was able to raise himself up in bed with comparative ease. The functions of the brain were most perfect through the whole course of his illness. The mind was clear and tranquil, and his spirits buoyant and happy. A peculiarity worthy of remark, was the alternate violent and tranquil respiration. He would doze a few minutes calmly, then start up with a convulsive spring, with hurried and laborious respiration, and then sink down into the same quiet state as before. These alternations continued to recur for the last week or ten days of his life. Ordinarily the heart's action was weak and feeble; and, during a paroxysm of palpitation, its beats were quite distinct. There was dulness on percussion, on a space corresponding to the apex of the heart, of two inches and a half in diameter. The valvular sounds were clear and distinct. The external jugulars were turgid and swollen. The tongue was slightly coated at first, but towards the close became covered with viscid, tenacious mucus and sordes. A strong desire for acid fruit and drinks was present, and continued until near the fatal termination. This occurred suddenly on the evening of the 8th of November.

Post-Mortem Appearances. An examination of the body was made thirty-six hours after death. *Thorax.* On raising the sternum, the *pericar-*

dium was observed to be very greatly distended, and firmly adherent to the diaphragm. It was filled with bloody serum and coagula. At the apex of the left ventricle was a dark livid mass, two inches in diameter, and an inch or more in thickness, beneath the pericardium, composed of layers of coagula and organised lymph, arranged in alternate patches, and having strength sufficient to prevent the escape of blood for months and perhaps years. An opening about the size of a crow quill was traced beneath the external layer, from which the fatal extravasation had taken place. The muscular fibres of the heart were here very thin, and in the centre entirely wanting. The layers of coagula and lymph, together with the firmly-adherent pericardium, gave such support to the weakened portion of the heart, as to preserve its functions for a long time. It is highly probable that a slight effusion of blood took place from time to time, while, by quickly forming coagula, and subsequently lymph, the mischief was repaired; and this was again and again repeated, until the last fatal effusion. The lungs were perfectly sound; but there were two or three quarts of serum in the cavity of the chest. The stomach, liver, spleen, and pancreas, as well as the other organs in the abdomen, were in a normal condition.

TUMOUR COMPRESSING THE RIGHT SIDE OF THE MEDULLA OBLONGATA AND THE NERVES PROCEEDING FROM IT.

This case was related to the Society of Biology in Paris, on March 15, by M. Charcot.

Case. The patient, a woman aged 48, was admitted into the Charity Hospital on February 28. She had been ill three months; and at first was under the care of M. Gubler. He was called to her a fortnight after the appearance of violent pain in the occipito-temporal region. The neck was slightly tender on pressure; the organs of sense were very susceptible; and every movement of the body brought on attempts to vomit, sometimes followed by a discharge. The pupil was much contracted; and there was obstinate constipation, but no distension or tenderness of the abdomen. The tongue was rather white, but moist; the pulse was not frequent; the skin was not hot. There was no pain in the trunk or limbs, nor paralysis, vertigo, or convulsions. M. Gubler diagnosed a superficial circumscribed softening of the grey matter, or rather an intra-cranial tumour. He applied leeches behind each ear, gave a calomel purgative, and ordered chloroform to be applied locally to calm the cephalalgia. Considerable relief ensued: but the patient was removed by her son two days after. She soon began to manifest great hebetude, and weakness in all her limbs, without pain; and at last her speech became very remarkably impaired. The cephalalgia soon became as severe as before. A seton was applied to the neck, and blisters to the thighs, but without effect; and she was admitted into hospital.

On admission, she answered questions pretty readily, but soon shewed how much her intellect was weakened and perverted. She complained of very severe pains in the cerebellar region: the head was constantly turned towards the right shoulder, but there was no rigidity or contraction of the muscles of the neck. All her limbs were relaxed; but she moved her legs and arms without much difficulty, when desired to do so. When pinched, she felt it readily. There was no strabismus, ptosis, or deafness. The pupils were equally dilated. She had never had vertigo, muscæ volitantes, or noises in the ears. There were no signs of paralysis of the facial nerve. She protruded her tongue readily; but the point was immediately carried to the right. She could, however, easily turn it in her mouth, and could turn the point to the left when desired to do so. The movements of deglutition were perfect. The vomiting and constipation continued as long as the patient was in hospital. A kind of coma supervened, and the patient died on March 9th: she never had convulsions.

From the symptoms, it seemed probable that there was a tumour com-

pressing the ninth nerve ; but there were no symptoms of syphilis, tubercles, or cancer. On post-mortem examination, a tumour, of the size and shape of a large pigeon's egg, was found on the front of the right lobe of the cerebellum, where it had formed a hollow. It also compressed the right peduncle of the brain, and pushed the medulla oblongata towards the left side. It had flattened the auditory, facial, pneumogastric, glosso-pharyngeal, and especially the hypoglossal nerves on the right side. The fifth pair was also much flattened. The third and sixth nerves were untouched. The tumour was very feebly adherent, and was easily removed by tearing some very loose cellular tissue. It was hard and dry, and grated under the scalpel : it was somewhat mammillated. Examined with the microscope, it presented fibroplastic tissue, with a predominance of the fibrous tissue.

WRAGG AND ARNOLD ON DENGUE, OR BREAK-BONE FEVER.

Two valuable contributions to epidemiology are contained in the *Charleston Medical Journal and Review* of this year; one, in the March number, by Dr. W. T. Wragg, entitled, History of the Break-bone Fever, an epidemic which prevailed in Charleston in the summer of 1850; the other, published in May, by Dr. R. D. Arnold, of Savannah, on the Dengue, or Break-bone Fever, as it appeared in Savannah in the summer and fall of 1850. We propose to lay the substance of these papers before our readers.

About the end of July and the beginning of August, 1850, break-bone fever began to prevail epidemically in Charleston; and the first case seen in Savannah by Dr. Arnold, broke out on the 28th August. In Charleston, up to the 15th or 20th September, it raged in an epidemic form. Persons of all ages and conditions were affected; but there were very few fatal cases, although the disease is estimated to have attacked seven or eight-tenths of the population of Charleston.

Symptoms. The description of the symptoms is taken from Dr. Wragg's memoir.

First Stage. The attack commenced with languor, lassitude, and general uneasiness, with nervous tremors, sometimes lasting for several days. There was very acute pain in the head, sometimes confined to one part, usually the temple, brow, or one or both eyes: sometimes it was general. In several cases, it was very severe in the ears, the angles of the jaws, and along the dental rows of both maxillary bones. There was, in some cases, intense pain and soreness in the balls of the eyes. [Dr. Arnold says, there was injection and watering of the eyes, with intolerance of light, and acute pain on moving the eyeballs: this was evidently owing to the affection of the sclerotic.] There was great pain in the muscles of the back of the neck, running up to the head; and, occasionally, an annoying sense of weariness. The pain in the head was often intermittent, and sometimes darting.

A very distressing symptom, in several cases, was the great pain and oppression in the chest, which materially impaired respiration, and induced a constant and urgent disposition to cough; which, however, was often impossible, from the severe pains produced by the convulsive motion of the chest. In many cases, there was great pain in the shoulders and back, but most generally in the loins and low down towards the sacrum, running round the body, and extending from the umbilicus to the hypogastrium. Sharp pains shot down the thighs and legs, being most intense in the knees.

There was general soreness of the whole flesh, and particularly of the bones; and this was so great, that many patients could find no ease either in the lying, sitting, or standing postures. Between the scalp and skull, the soreness was particularly distressing.

Soon after the onset of pain, sometimes along with or before it, fever appeared, usually ushered in by chill, and accompanied for many hours by a

chilly sensation alternating with flush. Nausea soon came on; and there was often vomiting, principally of the ingesta, with serous and mucous fluid. The nausea was frequently wanting; but was sometimes distressing, continuing even during convalescence. There was often pain in the bowels, and bilious diarrhœa; but sometimes the bowels were costive. The tongue was soon covered with a thick, brown, pasty coating; and there was generally great thirst. Sometimes the tongue was dry and brown, and the thirst intolerable, and the taste lost. The pulse was moderately full and quick, but never very active in force, quickness, or volume; seldom, according to Dr. Arnold, accelerated beyond 100. The skin was at first dry and harsh, but generally became moist, and often covered with free perspiration. In some cases, the heat and dryness were so pungent, that the sensation, experienced on touching the patient's skin, did not leave the hand of the physician for some time.

This stage, in the experience of both writers, varied in duration from a few hours to several days.

Second Stage. In most cases, there was an eruption on the skin. Sometimes it appeared even before the fever began to subside; sometimes it did not appear until all other traces of the disease had left. It was sometimes confined to the head and neck: it often extended over the whole body. It varied much in its character; assuming, in various cases, the appearance of scarlet fever, measles, impetigo, erysipelas, petechiæ, prickly heat, or papular eruption. Hæmorrhage frequently occurred from the nose, gums, tongue, fauces, stomach, and bowels; but was not generally excessive or obstinate. Want of sleep was a distressing symptom: in one case, it lasted about three nights and two days, and was followed by symptoms resembling *mania à potu*. In other cases, where the absence of sleep was less complete, the rest was disturbed by frightful dreams and fancies, not unlike those which characterise the disease just mentioned. When dreaming was not present, the patient tossed and moaned in sleep. The restlessness appeared sometimes to arise from imperfect sleep, sometimes from the soreness of the flesh.

The nervous tremors, which characterised the onset of the attack, in several cases increased, until, in two or three days, and when the fever was gone, the arms and legs would jerk and twitch without control. In children, these nervous jerks often announced the disease; the snap of the muscles could be distinctly heard. Often there were convulsions in children; but these did not occur in adult men, though there were symptoms of approaching delirium. Pregnant women, in all stages of gestation, almost universally escaped abortion. Dr. Wragg heard of only three cases.

In two cases, there was irritation of the urethra, with discharge of pus. One of the patients had never had gonorrhœa; in the other, the disease had been apparently cured. It was difficult to arrest the discharge. Dr. Dumaresq, of New Orleans, records a similar affection, in his account of dengue in that city, in the *Boston Medical and Surgical Journal*. The senses of hearing, smell, and taste, were variously vitiated or impaired.

The duration and severity of the disease varied very much. The fever, in some cases, was scarcely perceptible, or only existed a few hours. In others, it lasted from three to six days; in a few, it became intermittent, and continued two or three weeks. In some cases, the fever appeared to be absent. The patient would suffer for one or two days with pain in the back, head, and limbs, with giddiness, foul tongue, nausea, restlessness, and fatigue; these symptoms would gradually wear off, and be followed by weakness. After a few days, the eruption would come out in the form of heat, boils, carbuncles or abscesses.

Sequelæ. Recovery was sometimes rapid; but the easy transition from disease to health was the exception, and not the rule. Often, at the going off of the fever, the patient became extremely prostrate. There would be a deeply-coated tongue, with a bitter taste in the mouth; or a persistence of

the loss of taste. The pulse would become weak, the skin cool and covered with profuse perspiration, and a general feeling of faintness and sinking come on, almost as insupportable as the acute pain of the first stage. The spirits would be depressed. Many were left with persistent and violent pains in some part, which were relieved only as the appetite and strength were restored. These pains would sometimes last two or three weeks: they were seated in the muscular, ligamentous, cellular, or cutaneous tissues.

Boils, carbuncles, and abscesses, sometimes annoyed the patients for weeks after the other effects of the disease had gone. The boils were very large and numerous, and would cover the face or limbs. Carbuncles were scarcely less common. In one man, Dr. Wragg saw seven at one time on his back, with boils and phlegmonous abscesses in the interspaces; the entire surface of the back and sides being of the brightest crimson colour. In numerous instances, the inflammations about the fingers took the form of whitlow. Abscesses occurred on the neck, arms, thighs, breasts, buttocks, etc.; from some of these half a pint of matter was discharged at once, coming sometimes from the superficial, and sometimes from the deep-seated cellular tissue. In a healthy child, about nine months old, the fever was followed, after some weeks, by extensive impetigo of the face, neck, and shoulders.

The brain gave strong evidences of debility. On the abatement of the disease, the patient, in several cases, fell into a state strongly resembling delirium tremens; and the hallucinations were of the same character, the apparitions being always of the malignant and diabolical kind.

The fever had a great tendency to relapse, on premature exercise, fatigue, or any kind of exposure. Dr. Wragg has seen it occur three times, each time with marked aggravation of the symptoms. A mild first attack, would often be succeeded by others, excessively severe, and of longer duration. Relapses were most severe when the patient had undergone no medical treatment, under the impression that, as the disease was free from danger, it required no medicine.

As the season wore on, typhoid symptoms supervened in patients whose cases had been neglected, especially when due attention had not been paid to the convalescence. One of these cases offered a remarkable specimen of a purely nervous fever; the patient died twenty-eight days after the invasion of the nervous symptoms, and seventy from the first attack. In the same family, another child was only rescued by the timely use of nourishment, tonics, and stimulants, from falling into a similar state. In two other cases, this condition lasted respectively thirty and forty-two days.

Diagnosis. (Dr. Arnold.) From the *climate fever* of the country, the break-bone fever was not readily distinguishable in the earliest stages: but remission or intermission takes place in climate fever within twenty-four hours; while the paroxysm ushering in the dengue was continuous, even if it lasted forty-eight hours. Dr. Arnold often found the break-bone to be followed by climate fever in the same individual; and has attended cases of each, lying alongside of each other.

From *scarlatina* it was distinguished by the duration of the eruption, the absence of anginose affections, and the violence of the preliminary symptoms. The eruption in dengue was the sign for the abatement of the symptoms; while, in scarlatina, the worst symptoms are generally developed after the eruption has appeared. In scarlatina, the skin never breaks out into a perspiration on the first appearance of the eruption: in dengue, after the eruption has been well thrown out, the fever goes off by moisture on the skin. The eruption lasts but two or three days in dengue: in scarlatina, it lasts six or seven; and there is more desquamation of the cuticle in the latter than in the former. In scarlet fever, the eruptive membrane of the mouth participates in the efflorescence; and, as the skin begins to desquamate, the tongue also throws off its cuticle, and appears bright, red, and shining; and the papillæ, deprived of their sheaths, become very prominent. Any redness

of the lips, tongue, and gums, which may occur in dengue, is, as far as Dr. Arnold has observed, less intense than the redness of scarlatina, lasts a much shorter time, and is not followed by throwing off the cuticle. In two cases occurring in children, Dr. Arnold saw œdema follow the desquamation of the cuticle, as in scarlatina.

From *prickly heat*, the eruption is readily distinguished by careful examination. Prickly heat is a distinct papular disease.

Pathology. The want of *post-mortem* examinations prevents much light from being thrown on this subject. Dr. Wragg is of opinion, that break-bone fever is "essentially a cutaneo-nervous disorder": that the skin, irritated by the intense and protracted heat, dryness, and non-electrical condition of the atmosphere, underwent changes in its functions, and consequent disease. He then enters on a comparison of the break-bone fever which he witnessed, with the epidemics of dengue described by former American writers. The latter disease, he says, is the *scarlatina rheumatica* of Dr. Copland: and, after pointing out some points in which the affections seem to differ, he does not think it safe to attempt a final settlement of the question of identity between the dengue and break-bone fever. Believing that the resemblance is not sufficient for them to be classed together, he is unwilling to discard the idea that the diseases strongly resemble each other in many points. Whether the difference between the two diseases consists in anything more than that, in dengue, the impression is originated in the ligamentous tissues, while in break-bone fever it originates in the skin, he does not undertake to decide.[1]

Causes. Drs. Wragg and Arnold concur in pointing out the constitution of the atmosphere as connected with the cause of the epidemic.

The spring, in Charleston, had been remarkably cool. Early in July, the weather became very hot; and, from that time till the beginning of October, the range of the thermometer at midday, in the shade, was not far from 90°, often above. Water was exceedingly scarce. Very little thunder and lightning prevailed. The wind was from the west, and rather diminished than increased moisture. Febrile diseases of the ordinary types were rare; and the atmospheric conditions which seem to favour their occurrence were wanting. It is not a little remarkable, that the summer of 1780, when an epidemic, resembling the break-bone fever, occurred in Philadelphia, was, as appears from the description given by Rush, very similar to that of 1850 in Charleston.

Drs. Arnold and Wragg both believe the disease to have been non-contagious, and adduce several instances, which are, however, only valuable in a negative point of view. That it was epidemic, is proved by its rapid spread, or rather simultaneous appearance in different parts of the same place.

Treatment. Energetic measures were at first adopted; but were soon abandoned, being found to be erroneous. The practice in Charleston was to give a mild aperient, such as Epsom salts in infusion of serpentary, seidlitz powders, etc. Diaphoretic and opiate mixtures were then prescribed; usually carbonate of potash, with laudanum or paregoric, sometimes with camphor and sweet spirits of nitre. At the same time, pediluvia, warm poultices, frictions, etc., were used. Pain in or determination to the head, received marked relief from cold affusions. To compose the patient at night, pediluvia were ordered, and paregoric and sweet spirits of nitre given in hot ptisan. To overcome wakefulness, morphia was given with much advantage. For the early debility, Dr. Wragg gave stimulants freely, not waiting till the

[1] Dr. Arnold makes no hesitation in calling the epidemic which he describes by the name of dengue. Dr. Wragg's pathological reasoning seems fettered by the idea of localisation of the "primary impression" of the morbific agent. That the same miasm, being introduced into the blood, may produce very varied symptoms, is abundantly proved: witness the cutaneous and rheumatic types of scarlet fever. The primary essence of a febrile disease is not always to be found in the most prominent symptom. [Editors L. J. M.]

pain was relieved, but combining stimulants and opiates. Wine whey, wine, brandy toddy, porter, etc., were given freely ; and, at short intervals, quinine, with morphine or paregoric. Nausea was occasionally troublesome ; but usually yielded to carbonate of potash and laudanum.

The loss of appetite was often a barrier to the early use of nourishment ; yet, when the patient could be got to take some simple articles of food, the stomach was relieved, the thirst was lessened, and the tongue got clean. The cases treated early with stimulants, tonics, and nourishment, were those that did best, and had the least tendency to relapse. The latter occurrence seemed almost to take the form of periodicity ; and, for this, quinine was the best remedy.

HANNON ON THE ACTION OF METALS IN CHLOROSIS.

It has long been believed by M. Hannon, in common with others, that the iron and manganese given in chlorosis were assimilated; and the soluble salts of iron have been preferred, as being most capable of being absorbed and of uniting with the elements of hæmatosine. M. Hannon now opposes to this opinion some facts worthy of consideration.

He says that lead, copper, and bismuth cure chlorosis as well as iron or manganese, and have succeeded in some cases where iron has failed. The blood has thus recovered its iron under the influence of some other metal. Neither the iron, nor any other metal, combines with the hæmatosine ; for he believes that, although the number of blood-corpuscles be diminished, those which remain still contain a sufficient quantity of iron. He gives the following explanation of the manner in which the metals produce their good effects.

During digestion, hydrosulphuric acid is formed, which acts on the compound of iron and manganese contained in the food, and thus removes these metals. This is especially the case in chlorosis, in which there is a singular tendency to the formation of hydrosulphuric acid in the intestines. The way to prevent this effect is to administer a non-poisonous metal, capable of forming an insoluble sulphuret with the hydrosulphuric acid. This property belongs to bismuth, lead, and copper, as well as to iron and manganese. [Abridged from *Gazette Médicale*, August 23, 1851, as quoted from *La Presse Médicale Belge.*]

SPIRÆA ULMARIA, OR MEADOW-SWEET, IN DROPSY.

M. Tessier, of Lyons, has been led, by the observations of M. Obriot, a priest in the department of Haute-Marne, to make experiments on the effects of spiræa ulmaria in certain cases of dropsy. He has published his results in the *Bulletin de Thérapeutique.*

A person in the prison at Perrache had ascites, connected with intestinal irritation. After all other known diuretics had been tried in vain, M. Tessier prescribed a quart of the decoction of spiræa daily. From the third day, the patient passed much more urine than before. At the end of sixteen days, the medicine was suspended, and the urine immediately became scanty. It was resumed, and continued for six weeks ; and the ascitic effusion was absorbed without the production of any debility. In a case of hydarthrosis of the knees, the decoction of spiræa seemed to aid materially the action of vesicants, by increasing the renal excretion. In a young woman affected with heart-disease, it produced abundant diuresis, without lowering the circulation like digitalis. A young man accidentally took some of the decoction, in mistake for a pectoral ptisan. Four days after, he spontaneously remarked, that he had passed an enormous quantity of urine for forty-eight hours after. His condition became improved.

M. Tessier believes that meadow-sweet possesses diuretic properties ; that it is also slightly astringent and tonic ; that it is agreeable to the taste, and

produces no disturbance of the stomach or of the nervous system. All parts of the plant seem to be endowed with the same properties: the flowers are perhaps less active. The spiræa grows in March and April, and flowers in May and June. [*Journal de Médecine et de Chirurgie Pratiques*, June 1851.]

SUB-PERITONEAL RUPTURE OF THE DUODENUM.

The following case is quoted by the *Gazette Médicale* for August 2, 1851, from the *Annales et Bulletin de la Société de Médecine de Gand* for 1850. It is related by Dr. Burggraeve.

Case. On July 23, 1850, a sailor, aged twenty-four years, of strong constitution, was struck in the region of the liver by a beam. He was thrown violently to the ground; on rising, he was obliged to seek soon for a support. He had immediately severe pain in the bruised part, and vomited a considerable quantity of blood. When admitted into hospital, he complained of intolerable suffering in the epigastric region, and vomited undigested food mixed with bile. There was no external trace of injury beyond a slight abrasion; but the abdomen was tense and resistent in a circumscribed part. The treatment employed was general bleeding, cupping to the epigastrium, and emollient poultices. During all the day he continued to vomit; the rejected matter became more and more bilious; the pain was slightly decreased. He had a feeling of weight at the epigastrium, with thirst and want of sleep; there was no fever.

July 24. The pain was gradually becoming more severe; the abdomen was very tense and resistent under the right false ribs, but not in other parts. Twenty-four leeches were applied. Towards the evening, the pain and vomiting increased; the vomited matters were of a deep green colour.

The subsequent reports show a gradual aggravation of the pain and irritability of the stomach. On the 29th, the pulse became intermittent, the extremities cold, and the vomited matters were of a yellowish brown colour and putrid odour. On the 30th, the patient died.

Autopsy. The organs of the abdomen preserved their proper relations to each other. The intestines were in general of a blackish ecchymotic colour. The liver was slightly injured towards its anterior edge. The stomach was distended. The duodenum was torn for the two anterior thirds of its circumference, about two and a half inches from the pylorus, at the level of the orifice of the pancreatic and hepatic ducts. Under the peritoneum there was an effusion of yellowish matter, mixed with some bile. There was no trace of inflammation.

SURGERY.

LANGIER ON THE TREATMENT OF WHITE SWELLINGS WITH FUNGOSITIES OF THE SYNOVIAL MEMBRANE.

M. Langier criticises the various means which have been proposed for the treatment of white swelling with fungosities of the synovial membrane, and observes, that none of them have a *direct action*,—none act on the vessels themselves which constitute the morbid development from the membrane. The researches of M. Richet on these fungosities have shewn their eminently vascular nature. It is also well known, that the external surface of the synovial membrane is furnished with a richly vascular areolar tissue, which soon participates in the disease by becoming extraordinary developed, from the organisation of the coagulable lymph which it secretes. Hence the synovial membrane acquires a great thickness, from the fungosities and false membranes interiorly, and the thickening of the areolar tissue externally.

From observing the vascular relation established between the fungosities

and the external areolar tissue, M. Langier has derived a new method of treatment. He believes it to be perfectly harmless, to rapidly produce alleviation of the pain, and to diminish immediately and permanently the fungous areolar tissue external to the synovial membrane.

The treatment proposed consists in boldly plunging a lancet to the depth of several lines into the white swelling, at points where the fungous areolar tissue is thickest. Several punctures may be made at the same time. The immediate effect is an abundant local hæmorrhage from each puncture : from sixty to seventy grammes of dark venous blood escape. The fungosity diminishes ; it does not disappear completely, but, in place of being elastic and resistant, it becomes supple. This diminution continues for some weeks. The punctures should be repeated, either in the same or in different spots, to obtain a complete and permanent cure. Local bleeding from the vessels of a morbid tissue may well be understood to have great efficacy.

Case i. A young man, in the hospital La Pitié, had for several months had an arthritic affection of the right elbow, with rapid development of fungosities in the synovial membrane. On his admission into hospital, there was an elastic resistance on each side of the olecranon, much resembling the projection of the synovial membrane produced by dropsy of this joint. M. Langier diagnosed the existence of a white swelling, originating in the synovial membrane. There was constant moderate pain, even when the joint was moved. Motion was restricted, but was still possible. The arm could not be completely extended ; passive flexion was easy enough ; pronation and supination caused most pain ; no crepitation of the joint was observed during motion. The region of the elbow was evidently enlarged, especially behind and on each side of the olecranon. Leeches, flying blisters, and compression, were tried without success ; as was also the actual cautery. The disease went on increasing, when M. Langier was led to try the effect of the treatment described above. On the first puncture being made, there was an abundant flow of blood ; the tumour was diminished, and the pain was relieved. A month after the commencement of this treatment, the patient's elbow had been punctured fifteen times. In all the posterior portion of the swelling, the fungosities were soft and reduced in size ; and there was no pain in the joint : but the patient was not yet cured. Abscesses had formed, evidently communicating with the articulation of the head of the radius,—a part not easily accessible to the lancet. The lateral ligament seemed relaxed ; there was great mobility from side to side. There was no crepitation. The elbow and fore arm were enlarged ; the arm was smaller. The patient had lost flesh, and complained of much weakness. M. Langier does not know whether the limb can be ultimately preserved ; but he thinks the favourable change produced by the puncture worthy of attention.

Case ii. Another patient, in the same hospital, had necrosis of the right second metacarpal bone, near its phalangeal articulation. Opposite the necrosed part, there was a fungous ulcer, through which the necrosed bone could be felt with a probe. The metacarpo-phalangeal articulation was healthy : but above it, and at its level, there was an evident fungous state of the sub-cutaneous areolar tissue, not connected with the joint. On July 17, M. Langier made a deep puncture in this fungous tissue, which was resistant, elastic, and painful on pressure. Some venous blood escaped ; the pain was immediately relieved ; and the fungus was diminished. On the 18th, the tissue was soft, and reduced to about half its former size. On July 30, the improvement was still more marked. On the day following the punctures, the hæmorrhage was replaced by a serous exudation, mixed in some parts with a little pus.

M. Langier states his object to be to lead to more trials of his plan. Several interesting questions regarding it he reserves for future discussion. [Abridged from *L'Union Médicale,* 31 July, 1851.]

NEW METHOD OF APPLYING COLLODION FOR PRODUCING OCCLUSION OF THE EYELIDS.

The process of occlusion of the eyelids, by bringing them together and applying collodion over them, presents two inconveniences. If a drop of the collodion reaches the conjunctiva, it produces irritation, always very painful, and especially troublesome if, as is generally the case, the membrane is already inflamed. In the second place, if it be desired to examine the eye before the collodion has spontaneously detached itself, it becomes necessary to remove it with ether or scissors—both delicate and irritating processes, often causing pain and apprehension to the patients.

M. Barrier, of Lyons, employs a process which avoids these difficulties. A thread is placed vertically on the upper eyelid; a small piece of fine linen is then dipped in collodion, and placed on the lid, a little above the root of the eyelashes, so as to fasten down the thread. The same thing is done on the lower lid. To keep the lids closed, it is only necessary to tie the threads in a knot or bow; and it is quite easy to open or separate the eyelids. [*Annales d'Oculistique*, as quoted in *Gazette Médicale*, August 16, 1851.]

LOCAL APPLICATION OF WINE OF SQUILLS IN HYGROMA.

A Spanish journal, *La Union*, reports, in the March number, a case of hygroma cured by the application of compresses wetted with wine of squills. The patient was a woman fifty years old, who had had, for a year, a tumour of the size of a hen's egg on the front of the patella. Dr. Serrano, who was consulted, proposed iodine injection; but, as the patient objected, he was led to employ a remedy which he had already found successful in a case of hydarthrosis of the knee. Cloths dipped in wine of squills were applied, and fixed by means of a bandage; they were frequently renewed. Under this application alone, and without any particular regimen, the tumour gradually and completely disappeared in thirty-six days. Five months after, there was no return.

Hygromas, or collections of fluid in the patellar and anconal bursæ, must be treated by resolvent applications, or by puncture followed by iodine injection. Very severe symptoms have been known to follow the operation of opening them. The wine of squills, proposed by Dr. Serrano, is perhaps not so efficacious as a local application, as the concentrated solution of sal ammoniac, made according to the formula of M. Jobert de Lamballe, in the proportion of from sixty to a hundred and twenty grammes of the salt, to five hundred grammes of lime-water. Compresses, dipped in the solution, are applied, and frequently repeated. It is more likely to be efficacious when the tumour is of recent origin. M. Jobert has obtained some very successful results from its use. [Abridged from *Journal de Médecine et de Chirurgie Pratiques*, June 1851.]

ENORMOUS HYPERTROPHY OF BOTH MAMMÆ: EXTIRPATION.

M. Rouyer, of Saintes, has communicated to the Academy of Medicine in Paris, the history of a case, in which both breasts were enormously hypertrophied. We extract his account, with the remarks made by M. Robert in his report on it, read at the meeting of the Academy on May 6th, from the *Gazette Médicale de Paris* for May 10, 1851.

Case. S. R. menstruated when eighteen years old. Four months after, the menses almost entirely disappeared, without evident cause. The mammæ, which had been but slightly developed, became painful, and began to enlarge: first the left, then the right. The left breast increased to such a size, that it measured eighteen inches from the base to the nipple, thirty-two

inches round its middle part, and twenty-seven round the pedicle. The right breast was very nearly as large. The mammæ were pyriform, of a violet-red colour, and covered by numerous enlarged subcutaneous veins. They were soft on the surface; but more deeply there could be felt a large number of hard knots, from the size of a walnut to that of a hazel-nut, connected by resistant cords.

In 1842, a puncture was made, from which only blood escaped: potash was also applied without effect. M. Bouyer saw the patient in 1844, three years after the commencement of the disease. The general health of the patient was then good; there was slight emaciation. The tumours entirely covered the abdomen, reaching as far as the knees; they were so heavy, as to have made the patient keep her bed for two years.

An operation was regarded as the only resource; and, on June 24, the left breast was removed, the pedicle being compressed between two plates of whalebone, to prevent hæmorrhage. Notwithstanding this precaution, a considerable quantity of blood escaped from two arteries of the size of a goose-quill, situated at the centre of the tumour. Numerous arterial twigs were tied. The edges of the wound were brought together, but not completely; but little fever followed, and the patient was in a most satisfactory state at the end of a week.

Twenty-six days after the first operation, the right breast was removed: it has diminished remarkably in size. No untoward occurrences followed; and the patient was quite well in two months, the menses being re-established, and the whole body gaining flesh.

The left breast weighed 30½ pounds, and the right 20½ pounds. After the operation, the patient weighed 101 pounds; a third part of her weight had therefore been removed. The tumours consisted of a fatty tissue, in which were found glandular portions, not degenerated, but excessively hypertrophied.

M. Robert, in reporting on this case, called attention to what he considered as an etiological connexion between the suppression of the menstrual discharge, and the formation of tumours of the kind described. He regretted that no microscopic examination had been made; but thought that the affection was probably simple hypertrophy of all the anatomical elements of the mammæ.

With regard to the prognosis and treatment, M. Robert believed that, as long as the tumour did not embarrass the patient by its weight, it would be rash to operate; but, when the patient is so much inconvenienced as in M. Bouyer's case, extirpation becomes a matter of necessity.

From the few cases of hypertrophy of the breasts which have been already operated on, we find that, when one is removed, the other diminishes in size. Hence the largest tumour should be removed first; and we should wait a few months before operating on the second, to see whether it will become reduced to such a size as to be compatible with the functions of nutrition and locomotion.

VARICOSE DILATATION OF THE LYMPHATIC VESSELS OF THE PREPUCE.

M. Beau, of the Hospital Saint-Antoine, describes the above-named affection as situated under the mucous membrane on the internal and lateral aspect of the prepuce, in the lateral folds of which it is hence concealed. To see it, it is necessary to render tense the integument of the penis; it then appears under the form of a small round cord, quite transparent, from one to three millimètres in diameter, and one or two centimètres in length. This cord is resistant and hard: it cannot be compressed, nor can the transparent liquid which it contains be squeezed out. Its *dorsal* extremity is situated near the median line of the dorsum of the penis, and terminates insensibly

under the skin, so that it can scarcely be felt. The *frenal* extremity is near the frænum præputii, and ends abruptly in the mucous membrane; but it is not easy to perceive the lymphatic vessel, which is a continuation of the dilated portion. When the cord is pretty long, it presents a sort of intersection, probably denoting the presence of a valve; for, when it is pricked, only that portion on one side of the valve is emptied. The fluid is perfectly limpid: it reappears two or three days after the vessel has been emptied by puncture. The lymphatic varix first appears suddenly, after excessive irritation of the prepuce, as in coitus. It then disappears in a day or two; but returns on a renewal of the cause, and soon again disappears. It at length becomes permanent, and the cord is as large as a pigeon's quill. The affection does not produce any serious consequences.

The treatment varies, according as to whether the disease is intermittent or continuous. In the first case, it will be removed by astringent or tonic lotions. If it is continuous, a needle, armed with a thread, must be introduced into the frenal extremity, and brought out about a centimètre beyond. The pain produced is very slight. In three or four hours, the thread may be removed, sufficient inflammation having been produced. The cord is then swollen, somewhat tender, and opaque. It gradually decreases; and disappears in two or three months. If the thread be introduced at the dorsal extremity, the frenal end still remains dilated, and the operation has to be performed over again. [*Revue Médico-Chir. de Paris*, January 1851, as quoted in *Archives Générales de Médecine*, May 1851.]

OBSTETRICS.

DR. FLEETWOOD CHURCHILL ON OVARIAN IRRITATION.

In the *Dublin Quarterly Journal of Medical Science* for August 1851, Dr. Fleetwood Churchill describes an affection which he terms Ovarian Irritation. It most closely resembles subacute ovaritis, as described by Dr. Tilt; but it presents to Dr. Churchill certain points of difference which entitle it to be considered as a distinct affection.

It occurs in women of all ages within the limits of menstruation, and is most frequent in delicate nervous individuals. The chief symptom is uneasiness, generally amounting to pain, in one or both iliac or inguinal regions, but most frequently in the left. The pain may be a constant dull aching, or it may be acute and paroxysmal; it is greatly aggravated by standing, and generally by walking. In the severer cases, the patient may be quite unable to walk. On making a rectal or vaginal examination, nothing unusual will probably be discovered; but, in some cases, moving the uterus laterally causes uneasiness. There is no painful enlargement of the ovaries, such as is described by Dr. Tilt to exist in subacute ovaritis.

The circumstances under which the attack occurs are thus enumerated by Dr. Churchill. 1. In patients who occasionally suffer from amenorrhœa, it is not uncommon to find ovarian irritation at these periods, and not always altogether confined to them. Whether it be a cause or result of the suppression, is not clear. 2. On the sudden suppression of menstruation, the ovaries may be either affected by irritation, or, more rarely, by acute inflammation. 3. In dysmenorrhœa, there is more or less ovarian irritation, which Dr. Churchill believes to be generally secondary. 4. In menorrhagia, if the attacks be frequent, the ovaries generally become affected. 5. Ovarian irritation often accompanies congestion and erosion of the cervix uteri; but it most frequently comes on after the latter disease has persisted for some time, or after it is nearly or quite cured; but it then very soon subsides. 6. It occurs in hysteria, either with or without irregular menstruation. 7. Dr. Churchill has met with it in a few cases where the uterine and ovarian monthly functions were regularly performed, but the patients were of a highly nervous temperament, delicate, and childless.

When uncomplicated, the disease rarely gives rise to constitutional symptoms. The urinary secretion is mostly scanty, acid, and occasionally mixed with mucus. Many of the subjects are delicate and weak, and the attack keeps them so ; but it does not seem to aggravate their general condition.

Pathology. The absence of tumefaction generally, the negative results of an examination *per vaginam* and *per rectum*, the intermitting and paroxysmal nature of the attack, the absence of all the ordinary results of inflammation (abscess, accumulation of fluid, etc.), even in the severer cases, and the success of a certain line of treatment, appear to Dr. Churchill very strong arguments in favour of the disease being not inflammatory, but neuralgic. In most of these particulars, it differs from the subacute ovaritis of Dr. Tilt. It does not appear to stand in the relation of cause to the menstrual disturbance ; for sometimes it follows the latter ; or there may be even no catamenial derangement at all. It may disturb the menstrual functions in various ways, but it by no means invariably does so.

Causes. All influences—among which the most frequent is probably cold—which disturb the functions of the uterus or ovary, may be considered as causes of ovarian irritation. Excess in sexual intercourse has given rise to it in many cases ; and, in a few, it appears to have arisen from the entire deprivation of that stimulus.

Diagnosis. The relation to the menstrual functions, the symptoms, and the locality of the pain, render the diagnosis generally tolerably easy. It may be mistaken for intestinal irritation ; but the bowels, even if irregular, are free from irritability. From acute ovaritis, it is distinguished by the *tenderness being generally much greater than results from inflammation:* moreover, in acute ovaritis, the organ is always swollen and enlarged. In pelvic abscess, the hard and painful tumefaction is quite plain at the brim of the pelvis.

Treatment. Dr. Churchill has tried leeches, blisters, anodyne liniments, plasters, and enemata, with but partial success. The most efficacious method of treatment he finds to be the application of opium to the upper part of the vaginal surface. He uses it in the form of balls or pessaries, somewhat in the mode of Dr. Simpson's medicated pessaries, each ball containing two grains of opium, half a drachm of white wax, and a drachm and a half of lard. The whole forms a ball about the size of a large marble, and is placed at the upper end of the vagina by means of the speculum, the patient being left in bed for the rest of the day. Relief is very speedy, generally complete ; and, when the pain returns after a few days, a second application removes it. Dr. Churchill has tried this remedy in many cases, with almost invariable success. He has rarely found it necessary to bleed or blister since he first adopted it. He has tried these pessaries in cases of dysmenorrhœa, applying one the day before the catamenia were expected, with decided benefit.

In ovarian irritation, the bowels should be regulated. If the appetite is bad, vegetable bitters may be given, and it is generally useful to combine some alkali with them.

CÆSAREAN SECTION SUCCESSFUL.

Dr. Radford, in the *Provincial Medical and Surgical Journal*, No. xii, 1851, gives the details of a case, in which the Cæsarean section was performed by Mr. Goodman of Manchester, on account of extreme distortion of the pelvis, caused by mollities ossium. The child was extracted alive, and lived for seven months, when it perished from hydrencephaloid disease, arising from diarrhœa. The mother made a tedious but perfect recovery ; again became pregnant, aborted, and died. Dr. Radford adds :

" By the aid of the stethoscope, the incision was made in a direction to avoid cutting into the placenta ; this is very important. When the placenta

is cut upon or into, partial irregular contraction of the uterus happens; and through such an accident, the infant may be lost, as I have already stated. But besides this, the tissue of the uterus is likely to suffer from the force required to extricate it (the infant) from the spasmodic grasp of this organ. Besides, there may be greater risk of hæmorrhage when the placenta is prematurely disruptured or separated. The operation was timely performed in this case.

"There happened several important contingent circumstances, to which I shall briefly advert. The abdominal parietes were so much attenuated as only to allow a very slender hold to be taken by sutures, and were quite unequal to resist the pressure they were subjected to. By the force of the cough, etc., this weak structure was torn through, and the edges being thereby set at liberty, retracted on each side to a considerable extent, and exposed the bowels fully seven to eight inches in one direction, by three to five in the other. Notwithstanding this serious accident, the constitutional disturbance was only trifling in degree, and of short duration.

"The changes which successively took place on the exposed surface of the bowels were truly astonishing. A thin transparent effusion of lymph was first seen laid over the peritoneal coat of the intestines, which entered a little into the depressions formed between their convolutions. This thin gelatinous material gradually became thicker and more opaque, evidently the second step towards cicatrisation. During this wonderful process—for its effects were truly wonderful—innumerable vessels were seen, destined to carry on this great work of reparation. As this went on, there was a progressive and perceptible diminution in the size of the surface; and when completed, there was a cicatrix to be seen, very little different from one which is formed at the healing of a wound whose edges have been kept in juxtaposition.

"Symptoms of strangulation appeared, for the relief of which several expedients were adopted. The protruded portion of the bowel was ineffectually punctured. Nature, however, stepped in, and immediately the symptoms were relieved by the formation of an opening, through which a great quantity of feculent matter and flatus were discharged. This aperture continued throughout the case. Although this disaster protracted the patient's recovery, there is no doubt it had, at the time it happened, a most salutary effect. During the whole period of the case, the bowels were strictly attended to; and their ready obedience to our measures (chiefly enemata) considerably contributed to her recovery.

"The reparative process which happened in this case, and the decidedly conservative constitutional power which this woman had, proved, beyond dispute, that the opinion expressed by Dr. West (*London Medical Gazette*, No. 1210, February 1851, p. 245) is not infallibly true; and, therefore, ought not to influence us, and deter us from the performance of the Cæsarean section. The same restorative power was observed in the other successful case, which is already before the profession."

M. F. MARTIN ON RELAXATION OF THE SYMPHYSES OF THE PELVIS, AND ITS TREATMENT.

Parturition is sometimes followed by persistent relaxation of the various symphyses of the pelvis. As it commonly arises from the patient leaving the horizontal position too soon, as various sympathetic symptoms accompany it, and as other lesions may co-exist with it, it is not surprising that the nature of the affection should have been mistaken, sometimes for engorgement of the neck of the uterus, sometimes for retroversion of that organ. In persons thus affected, standing erect is peculiarly difficult, and sometimes almost impossible. In spite of using crutches, they feel severe pain in the sacral region, with stiffness in the lower limbs. In general, they are obliged to sit down, after making from ten to twelve steps. This exer-

cise frequently, by causing the two surfaces of the symphysis pubis to play against each other, produces an irritation of the tissues surrounding the urethra, and causes pressing and painful attempts at micturition. The ischia and ilia can also be felt with the hand to have an abnormal degree of mobility. If it be remembered, also, that the impediment to walking and standing commenced near the end of pregnancy, it becomes certain that the permanent relaxation of the pelvic symphyses is the cause of all the symptoms.

M. Martin has observed, that if the iliac bones be kept pressed against the sacrum, the power of walking is almost entirely restored. The apparatus which he uses consists of a large steel band, padded on the inside, embracing the whole circumference of the pelvis, passing over the external iliac fossæ, in the space between the crest of the ilium and the great trochanter. One lady, who could not walk twenty steps without being obliged to sit down twice or three times, was enabled in two days to walk about a large garden without aid.

It must be remembered, that the impediment is often trifling, and not always very easy to be recognised.

In one exceptional case, the band could not be left off. M. Martin advised the patient to wear it throughout her next pregnancy; and to remain in bed with it on for two months after her confinement. This was done; and in two years, she could easily walk a great distance without it. [*Bulletin Général de Thérapeutique*, as quoted in *Gazette Médicale*, July 26, 1851.]

DR. SAMUEL EDWARDS ON DYSMENORRHŒA.

In a paper communicated to the *Provincial Medical and Surgical Journal*, April 30, 1851, by Dr. Samuel Edwards, it is stated that dysmenorrhœa may be always found to depend on either—"1. A naturally contracted os, or cervix uteri, especially at its os internum; 2. A contracted or strictured condition of the passage through the neck of the uterus, from previous inflammation and ulceration; 3. Inflammatory congestion of the substance and lining membrane of the body or neck of the uterus, and sometimes of both, with or without ulceration, giving rise to temporary obstruction of the passage; or, 4. Obstruction of the passage from tumours, or other morbid growths."

Obstruction in some shape or other is looked on as an essential cause; but those who have inquired into the subject only superficially may be inclined to doubt this; for in some cases of dysmenorrhœa, room has been found to pass a bougie of moderate size. A case of this kind occurred to Dr. Edwards. The bougie passed readily on the first trial, but, on examining immediately before the expected period, the passage was found congested and swollen, so that the same bougie could not be made to pass, nor yet a much smaller one, without causing bleeding and much pain.

Dr. Edwards adduces cases illustrative of the various morbid causes above alluded to, and the results of what he considers the most successful modes of treatment. These include, with reference to the particular morbid condition, dilatation of the uterine passage with a bougie, probe, or catheter; scarification of the cervix (very seldom necessary) to relieve engorgement, followed by free pencilling with the solid caustic; insertion of a probe smeared with a mixture of caustic and extract of conium, combined with injection of alum and tannin, when rendered necessary by the presence of leucorrhœa; and the internal administration of blue-pill, henbane, and rhubarb-pill, or extract of colocynth, along with various forms of iron, quina, bitter infusion, strychnine, and muriatic acid, to combat dyspeptic symptoms, and restore the general health.

In one case treated by Mr. Paulson of Mansfield, in which intractable vomiting had been present for years, and unsuccessfully treated as an affec-

tion of the stomach, speedy relief both of the dysmenorrhœa and vomiting followed the dilatation of the cervix uteri with the bougie ; and the patient conceived for the first time. "The introduction of the probe," says Dr. Edwards, "acted as a stimulant, changing the perverted action of the mucous membrane, and promoted interstitial absorption, thereby diminishing the size of the cervix, and increasing the patency of the passage."

In another case, Dr. Edwards says: "There was no symptom which led me to infer uterine disease, and I looked upon it, in all probability, as one of a naturally contracted os and uterine passage, especially as she had been affected with the dysmenorrhœa from the first of her menstrual life. The speculum disclosed this to be a correct view. The vagina and cervix were healthy, but the os it was difficult to find, the only appearance of it being the merest depression; no probe that I could get would enter it in the slightest degree, with all the pressure I dare exert. Under these circumstances, a slight incision was made at the point mentioned, by means of a spear-shaped lancet, and I was then able to pass up a very small metallic bougie about half an inch. On April 26th, I again passed up the same bougie, and, after some little trouble, was able to introduce it up somewhat higher, viz.,—to the extent of nearly an inch. This operation was repeated every fourth or fifth day, with an increasing sized bougie, until the 15th of May, when menstruation again came on. It was attended this time with decidedly less pain; still it was considerable, but not so persistent. On May 22nd, I passed up a small sponge tent, but it produced so much pain that I was compelled to withdraw it. The bougies were consequently continued every three or four days, and kept in for ten minutes at a time, sometimes longer. On May 28th, I find it recorded that the whole of the uterine passage was larger, and that I could pass a small instrument at least two inches. On June the 10th, the catamenia again commenced; the pains were considerably lessened, and only lasted five or six hours. Her health was much improved. Up to August the 30th, the bougie has been occasionally employed; two periods have passed over with but trifling inconvenience, and she considers herself well."

The following observations, in reference to two other cases, the first occurring in his own, and the second in the practice of Dr. Wardell, are quoted at length, in consideration of their practical importance.

"The above case is clearly an illustration of the first cause; and the obstruction which existed both in the os and uterine passage, together with the result of treatment specially devoted to the overcoming of that defect, incontestably prove that in this case, at any rate, obstruction was the sole cause of the dysmenorrhœa. There was no disease in the passage, or any disorder of the general health, which could account for it; but on the obstruction being lessened, the pains were immediately diminished in severity. This was the first case which ever came under my notice, that required the use of any cutting instrument; but it was rendered necessary by the condition of the os uteri, which would not allow any probe which I had to enter it. After the enlargement of the uterine aperture, I was enabled to pass a small bougie half an inch, thereby showing that that was the narrowest part. Professor Simpson, of Edinburgh, informs me that he has long put on one side bougies and tents for the more potent means of incising the cervix uteri. I must confess that, theoretically, I am disposed to view the incision of the uterine passage as an operation of no very trifling importance, for two cases have been reported to me in which the operation had been performed; in one the hæmorrhage was extreme, and very alarming, in the other the incisions got well, and left the passage as impervious as before. To render incision successful, it does appear to me, therefore, that the bougie should be also had recourse to subsequently to the operation for some time, and therefore, on the score of the repetition of a delicate manipulation, the one is no better than the other; besides, it would be wise to anticipate a little, and reflect

how would this mutilated cervix and os dilate on the approach of labour, should the subject of the operation become pregnant! I have now treated very many cases of dysmenorrhœa successfully by means simply of the bougie, aided by the employment of caustic; and the success I have met with induces me to persevere in a plan that is not open to the objections which incision exhibits. This latter could only be applicable to cases arising from the first and second causes; for where disease exists in the uterine passage, it could only act as a temporary remedy. We must overcome, likewise, this disordered condition of the part, at the same time that a permanent passage is maintained; and this, my experience teaches me, is best obtained by the tent or bougie,—the latter of which I almost exclusively make use of,—the judicious application of caustic, and properly directed *general* treatment."

And again; Dr. Wardell's case "is an illustration of the second cause spoken of, viz., a contracted or strictured condition of the passage through the neck of the uterus, from previous inflammation or ulceration. Previous to the diseased condition of the womb, there was no dysmenorrhœa, but during the course of treatment it came on, and increased considerably after the ulceration was cured. The appearance of the os and its surrounding surface, induces one to ask,—How far the effect of the deep cauterization with the potassæ hydras may have been the cause of the contracted condition of the passage? My own impression is, that it was; and reasoning from its effects in other parts of the body, I think we are justified in the conclusion. I have applied the solid nitrate of silver around the cervix, and oftentimes up the uterine passage, without occasioning such a result in the slightest degree; and I take this opportunity of again repeating, (with considerably increased experience,) that which I urged in a paper read before the Provincial Medical and Surgical Association, at Bristol in 1847, and which was printed in the *Journal* of September 8th of that year, viz., 'in the generality of cases that have occurred to me, the nitrate of silver has answered all the purposes of an efficient caustic, and that I cannot but view the actual cautery, the Vienna paste, the pernitrate and acid nitrate of mercury, as well as nitric acid applications, as of too violent a character for ordinary use to that portion of the body.' Since that time I have never met with a single case of ulceration, engorgement, or induration of the uterus, that I have not overcome by means of the lancet, *lunar caustic*, and last, but decidedly not least, by *general* treatment. I am convinced that by some practitioners on uterine diseases in the present day, too narrow a view is taken of them; the diseased womb is looked upon as if it were isolated from the rest of the body,—as if it had no connections—no sympathies. The fact is too often lost sight of, that its morbid states may be, and I believe often are, the result of a morbid condition of the general system. The adoption of specialities at the present time, however valuable in some respects, has an injurious tendency in others. A physician who has directed his attention exclusively to diseases of a particular part, or who has chained himself down to one particular mode of investigation, is often apt, as I remarked before, to take too narrow a view of disease; and when general symptoms exist in the patient who applies to him, which he cannot well account for, from his limited practical knowledge, he is led unconsciously to distort them to his purpose, and fixes upon his "hobby-horse" (whatever it may be) as the seat of his patient's malady. The local disease is consequently attacked, whilst the depraved state of the system, which frequently gives rise to it, is neglected. Simple ulceration of the womb is, I am more and more satisfied, oftentimes an effect of a disordered condition of the general system, and should be met equally by general remedies, as by the application of local ones; the judicious adoption of the former will occasionally obviate the necessity of the latter, and when this is indispensable, the *general* treatment will generally shorten the period of the requirement of the *local*."

RETENTION OF THE CATAMENIA—DEATH FROM EFFUSION INTO THE PERITONEUM THROUGH THE FALLOPIAN TUBES.

Drs. Marchand and Massé relate the following case in the *Journal de Médecine de la Loire-Inferieure*, tome xxvi, Nos. 131 and 132. We quote it from the *Archives Générales de Médecine* for July 1851.

Case. A young woman, aged twenty-two, who had never menstruated, had suffered since the age of thirteen or fourteen from pains in the hypogastrium and loins. The pains recurred each month at the same period, and continued three or four days. During some years the abdomen had been tense, and, for some time, the enlargement and the pain had gradually and considerably increased: the general health was however very good. On examination, it was ascertained that the external orifice of the vagina was closed by a membrane, behind which the menstrual fluid was retained. This membrane was laid open by a crucial incision; and, after some blood had been forcibly ejected to some distance, there escaped two or three quarts of a black inodorous fluid, without clots. Compression was made on the abdomen. For three days, the menstrual fluid continued to escape without pain, to the amount of four or five quarts: the abdomen diminished in size, and the patient seemed to be going on well, when she was seized, on the fifth day, with subacute peritonitis, of which she died nine days after the operation.

Autopsy. The whole of the peritoneum beneath the transversalis muscle was in a state of inflammation. The convolutions of the intestines, slightly adherent to each other, were covered with false membranes, the serous membrane beneath being of a deep red colour, especially in the vicinity of the pelvis, where, and in the iliac fossæ, there was some pus or sero-purulent fluid. The uterus was longer than natural, about the size of a fist; the cavity of the neck was also dilated. The vagina was enormously dilated, especially towards the upper portion. The vaginal and uterine mucous membrane were tinged with blood. The Fallopian tubes presented different appearances in their uterine and in their ovarian portions. The uterine part was normal; while the ovarian or abdominal end was distended with black blood, and resembled a varicose vein of the size, at least, of the little finger. The dark blood which they contained was very fluid, and could be very easily pressed out in drops through the fimbriated end of the tube. There were some drops of the dark blood on the portions of the peritoneum in contact with the Fallopian tubes; and at these points were the most evident traces of peritonitis.

MATERIA MEDICA AND PHARMACY.

MUCILAGE OF PINUS BALSAMIA.

Dr. Cleveland, in a paper (*New York Register*, Sept. 1, 1851) on the American indigenous plants yielding mucilage, remarks: "The twigs of the fir balsam, when of but one or two years' growth, contain a large amount of mucilage, which, as it is combined with the balsam, is superior to that obtained from other sources for pectoral complaints, and those of the kidneys, bladder, or urinary passages, or of the stomach, as well as gleet, leucorrhœa, etc. This is to be prepared by selecting the extremities of the limbs of young trees, and after carefully stripping off all the leaves, the bark is to be separated from the wood, and steeped in hot or cold water."

CANTHARADINE OINTMENT.

This may be prepared by rubbing together equal parts of the ethereal solution and lard or mutton suet. Frictions made with this ointment induce vesication in a few hours. It is much used in Prussia.

REPORTS OF SOCIETIES.

SURGICAL SOCIETY OF IRELAND.

April 5, 1851.

Mr. Trant in the Chair.

Case of Gout in the Stomach treated by the Internal Administration of Ether and Chloroform. By Charles E. Bagot, M.D. The patient was T. Ll——, Esq., aged 42, formerly an officer in Her Majesty's service. He was rather a small man, very thin, and of a nervous temperament. His constitution was delicate, and probably somewhat impaired by hardships encountered whilst stationed in Canada. About two years previous to this illness, he had had a slight attack of gout in one of his feet, and since that period he had passed rather a slothful life.

He was lying on his left side, with his knees drawn up, suffering from pain referred to the epigastrium and cardiac region. There was great tenderness on pressure over the seat of the pain, also considerable hardness, exactly corresponding to the position of the stomach; the intense agony under which he laboured was of the true spasmodic character met with in cases of gout attacking this organ, a certain amount of pain being constant, with a violent spasm recurring at short intervals. He had frequent vomiting, also several attacks of chill, none of which amounted to a rigor, and he also complained of slight cramps in the hands and legs. He was restless, with cold surface; pulse 60, small and weak; tongue clean, and perfectly cold. He had been confined to bed the previous day with gout in his knee; his suffering had not been very severe, and he had, at eleven o'clock at night, partaken of a red herring and a glass of hot punch, after which he had fallen into a sound sleep, which continued up to six in the morning. At that hour he awoke in violent agony, and immediately discharged the contents of his stomach; the pain in the knee-joint having entirely disappeared. Dr. Bagot saw him at nine a.m., three hours from the commencement of the attack, at which time it would be difficult to imagine anything more unpromising than his case.

Dr. Bagot covered the abdomen with sinapisms, and had his legs and feet rolled up in large pieces of flannel wrung out of hot water, containing a quantity of mustard and salt, which were frequently renewed. He immediately administered eighty drops of tincture of opium, with a drachm of ether; but not finding the slightest relief afforded by the laudanum, he substituted chloroform in combination with the ether. He considered that the terchloride of formyle would have an advantage, from its being not only antispasmodic, but also stimulating and diaphoretic. The most marked relief followed its exhibition. For three hours this mode of treatment was followed, at the end of which time signs of reaction appeared. The dose of ether having been from half a drachm to a drachm, and that of chloroform from twelve to eighteen drops, a close approximation to the entire quantity of each would be ʒ x of ether and ℈vij of chloroform. During this time his thirst was very great, and he took frequent draughts of cold water, which seemed to accumulate in his stomach, and be thrown off at intervals, this vomiting not being attended with either an increase or diminution of the pain, and not followed by any particular exhaustion. As soon as reaction had fairly set in, he administered two terebinthinate enemata, which came away without any fæces. At three o'clock reaction, which had been very slow, was fully established, his body having become warm, and his tongue much nearer to a natural temperature, though yet rather cool. The pain in the stomach was much relieved, but the vomiting was now more troublesome, and his

thirst very great; he was also much annoyed by windy eructations; the hardness in the region of the stomach was persistent; pulse fuller. A grain of calomel, rubbed up with a little white sugar, was now given every half hour. At six o'clock, the vomiting had in a great measure subsided, a little warm whey having remained on his stomach. He was also freer from pain than he had been at three p.m.; pulse as before, 60 in a minute, and fuller. The calomel was continued every hour. At eleven p.m., he was much better; his bowels were well acted on. The calomel was continued at intervals of three hours; and sinapism was applied on the epigastrium, and his feet kept hot through the night. He gradually recovered, the gout appearing again in the same knee next day but one, where it continued to give considerable pain for about thirty hours. A little dull pain continued for a day or two in the epigastrium, but the hardness remained for some time, and disappeared very gradually.

April 19, 1851.

Mr. Trant in the Chair.

Case of Disease of the Head of the Tibia. By Dr. Nolan. The patient was a girl, aged about 17 or 18, on whom Dr. Nolan performed amputation. The diseased part consisted of large cells, about an inch in diameter, filled with bloody fluid. The disease extended into the interior of the tibia and all round it; the fibula was beginning to be affected, and a few inches above the ankle, on the front of the tibia, a tumour, about the size of a nutmeg, was seen, the disease beginning there also; the knee-joint and cartilages were all of a yellowish hue; the capsular ligament was thickened and yellowish, and the synovial fluid red, and the fluid in the bursæ around the joint of the same character as that in the tumour. The shaft of the femur seemed healthy, as well as the muscular structures.

Case of Ligature of the External Iliac Artery. By Charles Halpin, M.D. Private M. M., a hatter by trade, aged 21, belonging to the 35th regiment, was admitted to detachment hospital on the 13th of August, 1850. He was labouring under gonorrhœa virulenta, with bubo in the right groin. There was also an ulcer on the dorsum of the glans penis. He had been ailing between four and five days. A poultice was applied to the groin, and solution of nitras argenti to the sore on the penis, and he was ordered ʒj of sulphate of magnesia, with one-sixth of a grain of tartrate of antimony three times daily. He was treated by mercurials and opium, and subsequently by quinine, up to September 10, when he appeared almost fit for discharge. At nine p.m., he had a smart hæmorrhage from a fistulous point of the ulcer in the groin. A compress of lint, with moderate pressure, arrested it completely.

Sept. 11*th.* In the evening, about an ounce of blood came away.

Sept. 12*th.* At half-past twelve p.m. considerable hæmorrhage set in, evidently from the femoral artery; it gushed out with extreme violence on removing the compress. In consultation with Dr. Roe, it was decided to put a ligature on the external iliac artery; but this proceeding was deferred until four p.m. In the interim, the bleeding was repressed by a firm compress, retained by relays of men, who relieved each other at intervals. A semilunar incision was made above, in the direction of Poupart's ligament; a ligature was placed on the external iliac, about two inches above Poupart's ligament; the slight make of the patient, and the empty condition of his bowels, favoured the operation, which was performed in about three minutes. There was not half an ounce of blood lost. All hæmorrhage ceased instantly, as did all pulsation in the limb; the leg was wrapped in warm flannel. At six p.m., the limb had recovered its temperature; slight smarting pain in the track of the incision. He had an anodyne draught at bed-time.

Sept. 14*th.* About an ounce of venous blood came away from the site of the bubo about two a.m. He had some pain along the course of the vessels as far as the knee.

Sept. 15*th*. After having passed a quiet night, at twenty minutes past five A.M., about six ounces of venous blood came away from the site of the bubo ; the bleeding ceased spontaneously, but recurred about twelve hours afterwards, to the extent of ten ounces, and ceased as before.

Sept. 16*th*. Forty-five minutes past two P.M. Hæmorrhage having returned, Drs. Roe and Halpin opened a tumour that had formed, within the last twelve hours, in connexion with the bubo and site of the hæmorrhage, and a large quantity of coagulum turned out. A considerable discharge of blood took place, apparently from the point at which the profunda femoris is given off. From the sloughy condition of the parts, it was impracticable to apply a ligature ; a compress of sponge, etc., was applied, which controlled the bleeding. The pulse was rapid and tremulous ; about thirty ounces of blood, it was estimated, were lost this day.

Sept. 20*th*. Hæmorrhage, evidently arterial, occurred at ten A.M. All dressings were removed ; the bleeding, which had ceased, proceeded apparently from the site of the ligature ; he complained of *intense pain* along the inner side of the thigh and leg. He died at two P.M., hæmorrhage having returned a few minutes previously.

A *post-mortem* examination was made on the 21st of September, nineteen hours after death. The peritoneum, which had not been wounded in the operation, was found adherent to the cæcum ; it was easily torn in separating it from this part. The artery was exposed from the bifurcation of the aorta to the middle of the thigh. The ligature applied to the external iliac was retained by some portion of the external coat only ; the artery had not been disturbed to a greater extent than permitted the needle to pass under and between it and the vein. About two inches below Poupart's ligament, there was an *aneurism* of the femoral artery, capable of containing a small chestnut. The origin of the profunda femoris was implicated in this aneurism. The femoral vein was destroyed for about three inches of its course, below Poupart's ligament. The ulceration connected with the bubo, reaching the aneurismal sac, eroding its coats, originated the hæmorrhage on the 10th instant, which terminated in the death of the patient on the 20th ; but the blood which came away on the 14th, 15th, and 16th, and which had all the character of venous blood, probably descended through the iliac vein, and escaped by the femoral vein, which had been destroyed by ulceration.

Remarkable Case of Biliary Calculus. By Dr. Benson. The calculus was four inches and a half in circumference, and in the lesser size three inches and a half. It was altogether the size of a walnut, and had passed through the rectum of a man aged 56.

Strangulated Femoral Hernia. By Mr. Ellis. The patient, a female, aged 60, of delicate constitution, who had had several children, was admitted into Jervis-street Hospital, on Friday, March 2nd. She had suffered from reducible hernia for several years. The strangulation had existed from the previous Tuesday, and the symptoms were not those of acute strangulation. The tumour was oval, elastic in the centre, and œdematous at its circumference; there was pain at the epigastrium; not much thirst; occasional vomiting of bilious matter; the abdomen was not much tumefied, nor very tender on pressure. The taxis, ice, and enemata, were tried without effect. The operation was therefore determined on. It was commenced by an incision of an L shape. The superficial fascia was thin; there was no fascia propria; the sac was so thin, that the omentum could be seen through it. No fluid escaped on incising the sac. The omentum adhered to the sac, and its under surface adhered to a knuckle of intestine. The stricture at Gimbernat's ligament was so tight, that the nail could not be introduced; and it required a good deal of force to pass the director, on which the bistoury was introduced, and the stricture divided. On passing in the finger, a band was then felt, which was divided, and the intestine was returned without any

difficulty; after the adhesions were broken up, the omentum was also returned.

Very little alteration in the symptoms took place after the operation. There was no action from the bowels, On Sunday morning, there were symptoms of sinking; and the patient died at six o'clock that evening, fifty-two hours after the operation.

On a *post-mortem* examination, the omentum was found to be adherent to be adherent to the peritoneum of the anterior wall of the abdomen; the knuckle of intestine then came into view, which had protruded through a well-defined circular hole in the omentum, and was *there* strangulated.

Cases of Strangulated Hernia. By Dr. Macdonnell. Dr. Macdonnell related the heads of a case of this kind, in which he had operated three or four months since in the Richmond Hospital. Dr. M. was sent for at a late hour to see the patient, whom he found labouring under severe symptoms of strangulation. There was a large, very tense, and painful scrotal hernia; an old reducible hernia having become strangulated about forty-eight hours before. There was a sunken expression of countenance, frequent vomiting, hiccup, small and rapid pulse, tympanitic and tender abdomen, and constipation since the strangulation. The taxis having been already perseveringly tried without success, he proceeded to operate. Nothing worthy of note occurred till the sac was opened. It contained nearly a foot of tensely distended small intestine. A stricture was discovered, and divided at the situation of the internal abdominal ring. To his great surprise, he found that he could not return the intestine. The stricture was then dilated, so as to permit the forefinger to pass freely into the cavity of the abdomen. Still every effort to return the intestine *en masse*, piece by piece, or even to empty the contents of the intestine, completely failed. Finally, the attempt at reduction was given up, under the impression that the intestine was still strictured by some internal band beyond the reach of the finger. The patient died within twenty-four hours after the operation; and, on examination, the explanation of the above-mentioned singular circumstance was found in the fact, that the intestine had been turned round and round on itself, so as completely to obliterate its calibre at the internal abdominal ring. This accounted for the impossibility of emptying the intestine of its contents, and showed that, without untwisting it, the intestine could only have been returned *en masse*, which would have required, such was the quantity and distension of the protruded part, an opening several inches wide.

MISCELLANEOUS INTELLIGENCE.

Dr. Cormack's Letter on Homœopathy, to the Provincial Association. In our last number, we inserted full reports of the speeches delivered at Brighton, upon the occasion of the unanimous repudiation of the present prevailing professional laxity and charlatanry, in connexion with the homœopathic quackery. We had not then room for Dr. Cormack's letter; by the publication of which the course of action so cordially adopted was first definitely suggested. The letter originally appeared in the *Provincial Medical and Surgical Journal* for 6th August, and was also published as a pamphlet, with additional matter, in the form of an appendix. The pamphlet is out of print.

"Our Relations with Homœopathy. *To the Editor of the Provincial Medical and Surgical Journal.* Putney, July 29, 1851. Sir,—While, with you, I recognise the greatness of the benefit conferred on legitimate medicine by the recent acts of the Scottish Colleges, I cannot help feeling that we ought to do more than, as individuals, yield to them our concurrence and applause. We ought not, I think, to allow our annual meeting at Brighton to pass without issuing a deliverance upon the subject of homœo-

pathy, as explicit as those which have come to us from beyond the Tweed ; and there is one point upon which it appears to me that even more plainness of expression is required.

"To adopt resolutions setting forth that the homœopathic dogma and the doctrine of infinitesimal doses have no truthful basis, and are, in fact, mere nonsensical delusions, may be quite proper, inasmuch as some honest but weak and undisciplined minds have been seduced by the hardy assertions and false reasoning by which these errors have been supported. But something more is required, if it be true, as I think it is, that this fashionable quackery is so susceptible of adaptation to the most contradictory prejudices of shallow men and women, as to have become a sort of Protean deceit, able to lure lucre by every imaginable wile from the sick and the silly. The worst part of homœopathy is, in my opinion, the DISHONESTY of the majority of those who live by it. When patients are once secured, they are, I think, very rarely treated in accordance with the principles of Hahnemann ; but are retained by the combination of every current medical novelty which may at the time be most in favour with the moneyed throng of quack-fanciers. I have not been able to hear of any one who honestly relies on homœopathy for the cure of disease ; but I can point to many calling themselves homœopathic practitioners, who attempt to relieve the symptoms of disease by the same means which we would adopt, and to others, who retain their *clientelle* fully as much by practising hydropathy, Mesmerism, and miscellaneous tricks, as by giving the globules. If homœopathy were honestly practised, it might be amicably dealt with ; but as it is truly a combination of any and every available charlatanic trick, it cannot be effectively opposed as a distinct medical heresy, and therefore all that remains for us, as men of science and men of integrity, is to give notice, that we exclude from all professional intercourse practitioners who are in any way engaged in using or upholding a system which we think bears upon its very face fraud as well as absurdity.

"I have heard it urged in extenuation of the fall of some medical men, that they had large starving families, and that they had met with distressing pecuniary reverses. It has often been said to me that if they treated disease to the best of their ability, there was no great crime in their sailing so far with the fashionable current as to call themselves homœopathic, and to give globules as placebos. From my heart I compassionate these persons ; for I know that want has distorted and destroyed the moral sense even in good men ; but, while in some cases we pardon the transgressors, let us not be tolerant of the transgression. It behoves us, quickly and decidedly, to draw a broad line between medicine and homœopathy, so as to encourage and strengthen the hands of many in our impoverished and overstocked profession, who, though tempted, have not yet bartered principle for pelf.

"The Provincial Medical and Surgical Association has now the power, and the near opportunity, of drawing this much-needed line of demarcation :— *Let the Association declare that the names of homœopathic practitioners and of those who hold professional intercourse with them, cannot be on its list of members.* The promulgation of this law would enlighten the public. It would also deter some too-facile consulting physicians from meeting the homœopathic quacks "simply for diagnosis"; and it would make it impossible for operating surgeons to say they did not mean to insult the profession, "that they only went to give a surgical opinion" or "perform an operation". When it is known that such unworthy proceedings are of daily occurrence in London ; and when we see Fellows of our metropolitan Colleges eagerly seeking as the patrons of their hospitals Lord Carlisle, Lord Robert Grosvenor, and other noblemen who are notorious abettors of homœopathic charities, is it wonderful that the public mind has become poisoned, and unable to discriminate between legitimate medicine and fraudulent practice ? When we see Fellows of both London Colleges so demeaning themselves, how

can the colleges serve the cause of truth? In these circumstances, it is doubly the duty of our great Association to come forward; and when we meet at Brighton, let the fact of membership be made a more distinctive test of professional morality than any now existing out of Scotland. I am, Sir, your obedient servant, JOHN ROSE CORMACK."

HOMŒOPATHIC REJOINDER TO THE BRIGHTON RESOLUTIONS. "ASSOCIATION FOR THE PROTECTION OF HOMŒOPATHIC STUDENTS AND PRACTITIONERS. At a meeting of the committee, held on the 1st of September, in consequence of the recently published resolutions of the Provincial Medical and Surgical Association, and other allopathic bodies, regarding homœopathy, it was resolved,

"1. That homœopathy is thoroughly reconcileable with science and common sense, is in accordance with the experience of some thousands of medical men, and deserves the study of practitioners and the confidence of the public.

"2. That the framers of the hostile resolutions referred to, and other prejudiced opponents, are totally ignorant of homœopathy, avowedly refusing to study its principles (in the writings of Hahnemann and others), and to witness its practice in the homœopathic hospitals and dispensaries, to which they have been repeatedly and cordially invited.

"3. That, notwithstanding the difference in their treatment of disease, there can be nothing derogatory in homœopathists and allopathists (equals in education, science, and social position) consulting together at the request of patients and their friends as to the nature of the malady.

"4. That the resolutions of the Provincial Medical and Surgical Association, representing, as they do, the opinions of only a small fraction of the allopathic body, are in themselves, and for the reasons given above, utterly valueless.

"WM. MACDONALD, M.D., F.R.C. P.E.,
Professor of Civil and Natural History
in the University of St. Andrew's.
JAMES CHAPMAN, M.A., Cantab. M.D.
EDWARD HAMILTON, M.D., F.L.S.
DAVID WILSON, L.R C.S.E.
THOMAS SEADAM, M.R.C.S.
ROBERT E. DUDGEON, M.D., Secretary.

82, Glocester-place, Portman-square, London, Sept. 1, 1851."

THE BRIGHTON RESOLUTIONS, of which the above is a parody, we subjoin for the sake of comparision.

1. That it is the opinion of this Association, that homœopathy as propounded by Hahnemann, and practised by his followers, is so utterly opposed to science and common sense, as well as so completely at variance with the experience of the Medical Profession, that it ought to be in no way or degree practised or countenanced by any regularly educated medical practitioner.
2. That homœopathic practitioners, through the press, the platform, and the pulpit, have endeavoured to heap contempt upon the practice of Medicine and Surgery as followed by members of this Association, and by the profession at large.
3. That for these reasons it is derogatory to the honour of members of this Association to hold any kind of professional intercourse with homœopathic practitioners.
4. That there are three classes of practitioners who ought not to be members of this Association, viz.—1st, real homœopathic practitioners; 2nd, those who practise homœopathy in combination with other systems of treatment; and 3rd, those who under various pretences meet

in consultation, or hold professional intercourse with those who practise homœopathy.

5. That a Committee of seven be appointed to frame laws in accordance with these Resolutions, to be submitted to the next annual meeting of the Association.
6. That the thanks of the Association are eminently due and are hereby given to the Presidents and Fellows of the Royal Colleges of Physicians and of Surgeons of Edinburgh, for their determined stand against homœopathic delusions and impostures.
7. That the thanks of the Association are also due and are hereby given to the Universities of Edinburgh and St. Andrew's, for their resolution to refuse their diplomas to practitioners of homœopathy; but the Association feels imperatively called on to express its disapproval of any School of Medicine which retains among its teachers any one who holds homœopathic opinions.
8. That these Resolutions be printed, and transmitted to all the Medical Licensing Bodies and Medical Schools in the United Kingdom; and that they likewise be inserted in the *Times* newspaper, the *Morning Post*, the *North British Advertiser*, *Saunders's News Letter*, all the British and Irish Medical Periodicals, and in such other Journals as the Council may sanction upon the recommendation of the Branch Associations.

Homœopathy Repudiated in Guernsey, and the Resolutions of the Provincial Medical and Surgical Association Approved. *To the Editor of the Lancet*, Sir,—The inclosed has been sent to the Committee on Irregular Practice of the Provincial Medical and Surgical Association. It is far too important a document to be merely laid before a few individuals, and presented twelve months hence at the next general meeting of our Association. Looking at the signatures attached to this address, I feel, therefore, that it is my duty, not only to communicate it to my colleagues in the committee, but to request the favour of your publishing it to the profession in the pages of the *Lancet*. Allow me to add, that since the Brighton meeting I have received upwards of a hundred letters, approving very heartily of the course then adopted in describing the three classes of practitioners who ought not to be allowed to be members of our Society. I entertain the hope that other bodies will act in a similar manner; and that, ere another year has elapsed, there may be a broad line drawn between homœopathic charlatanry and rational medicine. I am, Sir, your obedient servant,

Putney, Sept. 13, 1851. John Rose Cormack, M.D.

The following is the communication referred to by Dr. Cormack:—

"*To the Committee on Irregular Practice of the Provincial Medical and Surgical Association.*

"Guernsey, Sept. 10, 1851.

"Gentlemen,—We, the undersigned medical practitioners of the island of Guernsey, beg to offer our warm congratulations and sincere thanks to the Provincial Medical and Surgical Association in general, and to you, as their Committee, in particular, for the manly and straightforward Resolutions unanimously adopted at a meeting of that body held at Brighton on the 14th ultimo.

"We likewise desire to express our cordial approval of the uncompromising tone of the speeches delivered on that occasion, when, in our humble opinion, the principles of truth, honesty, and morality, were enunciated, the science of medicine vindicated, and the injurious tendency of homœopathy—its hollowness, absurdity, and dishonesty—demonstrated by clear, comprehensive, and irrefragable facts.

"We would fain hope that the dignified manner in which the Association has responded to the movement of the Universities of Edinburgh and St.

Andrew's, to expose and discard homœopaths, will be followed by the English and Irish Colleges, and thus enable the United Kingdom to set as bright an example in checking error and upholding truth in medicine, as it has recently done in religion.

"We derive additional satisfaction in addressing the Provincial Medical and Surgical Association, from having throughout firmly, advisedly, and conscientiously resisted all attempts to induce us to hold intercourse with homœopathic practitioners, or to countenance a system, the offspring of quackery, the refuge of imposture, and the nursling of dupes.

"We now calmly await the course of events, satisfied that truth and honesty will prevail, and that homœopaths, who seek to be considered as regular practitioners, and pertinaciously shelter themselves under the *ægis* of medical institutions, will ultimately be exposed and repudiated.

"We have the honour to be, gentlemen, your obedient servants,

"John Mauger, M.R.C.S.Eng.
S. Elliott Hoskins, M.D., F.R.S.
N. Magrath, M.R.C.S., R.N.
De Beauvoir De Lisle, M.D.
Thomas L. Mansell, A.B., M.D.
John Roberts, M.R.C.S.Eng.
R. G. Carey, M.D.
Fred. C. Lukis, M.R.C.S.Eng., M.D.
M. A. Bazille Corbin, M.R.C.S.Eng.
B. Collenette, M.R.C.S.Eng.
Martin Mauger, M.R.C.S.Eng.
Polydore Tranter, M.R.C.S.Eng.
J. Baines, M.R.C.S.Eng."

Dr. J. Y. Simpson and Mesmerism. *To the Editor of The Lancet.* Sir,—During the last few months, I have been more than once, directly or indirectly, alluded to in your leading and other articles in tones of reprehension, and have been broadly accused of committing professional faults which I never committed, and of holding opinions which I never held.

Sometimes your editorial accusations have been in the form of extracts from the writings of others; sometimes they have consisted of observations offered by yourself.[1] I have not of late answered any of these accusations, partly because the task of doing so is always a disagreeable task, and partly because I fear and feel that I am getting too old and callous to care about such things.

In your journal of Saturday last, there is a renewed attack upon me in an editorial article, in which I am held up by you as a believer in animal magnetism; and, at the urgent request of an esteemed London medical friend,

[1] Thus, for example, two or three months ago, you stated, in one of your editorial articles, that an Edinburgh physician (and the allusion was intended to apply to me) had come up from Edinburgh as far as London, to hold a consultation with a homœopathist physician at Brighton, but that I found professional feeling so "hot" upon the subject, that I wisely returned. So far was this from being the fact, that I wrote from Edinburgh immediately on receiving the letter from Brighton, and stated that I was engaged to visit professionally, as soon as I could possibly leave Edinburgh, two chronic cases, the one in London and the other in Paris; that I would thus pass and re-pass near to Brighton, but that I could not meet the practitioner, as he was known to be a homœopathist. Let me add, that I believe professional opinion is "hotter", and in a healthier state upon this subject in Edinburgh than in London. When in London, on the occasion referred to, I was told by one of your first surgeons, that he was attending the foot of a noble duke, whilst a celebrated homœopathist was attending to his grace's stomach and constitution.

Whatever laxity may have existed on the question, here or elsewhere, in past times, there exists none now in Edinburgh, since the Colleges have taken up the subject, and pronounced upon it.

upon whose judgment I place very great reliance, I at last unwillingly take up my pen to say that, on this, as on various other former occasions, your accusation is erroneous.

I do not believe, and never did believe, in animal magnetism. During the last ten or fifteen years, I have repeatedly seen experiments made upon the subject, and I have repeatedly made them myself. In the course of them, I have witnessed very interesting physiological and psychological results, such as the production of deep sleep, fixture and rigidity of muscles, lesions and perversions of sense, etc.: but I have no belief whatever that these effects are the effects of any power, force, agency, or entity, such as is understood by the term animal magnetism, passing from the so-called "Mesmeriser" to the so-called "Mesmerised". On the contrary, these experiments have firmly convinced me, as they have convinced others who have seen them, that these, and other phenomena of the like kind, are merely effects produced by the mind of the "Mesmerised" upon his or her own economy; that they are only self-mental acts, if I may so speak, and that they are as independent of any "Mesmeric" influence as are the phenomena of common sleep, or common dreaming, or common hysteria.

If you, or any of your readers, have, perchance, any desire to know more explicitly my opinions on the subject, you will find them stated at greater length in the May number of the *Monthly Journal of Medical Science*, in a discussion on the subject of "Electro-Biology", before the Edinburgh Medico-Chirurgical Society. In that report it is, *inter alia*, mentioned, that (to quote the words of the report) "Dr. Simpson stated that he totally disbelieved in any of the so-called higher phenomena of animal magnetism,—as lucidity, transference of the senses, clairvoyance, etc. If a person could see with the tips of his fingers, or the pit of his stomach, as was averred, it would be an enormous fact, and would require an enormous amount of proof to substantiate it as a fact. But the evidence adduced was generally of a very imperfect kind, and melted down before accurate inquiry. He had such a conviction of this, that he offered to place in the President's hands £100, which he would give to Dr. Macdonald for the scheme for which he (Dr. M.) was lecturing, if Dr. Macdonald could bring any clairvoyant who could read a line of Shakspeare, or two or three words out of the dictionary, which Dr. S. would shut up in a box. If there was any truth in clairvoyance, why should not a clairvoyant be able to gain for Dr. Macdonald this sum of money." (*Monthly Journal* for May, p. 487.)

Now, to show you the sincerity of my belief, let me put this same proposition in another shape: I will, if you will allow me, place five such boxes or packets (each of them containing a line of Shakspeare) in your hands, and in the hands of a small committee of medical men, whom you and I shall conjointly agree upon, and who with you, shall be judges, and make all the necessary arrangements; and I now offer, through you, £500, for the reading of these included five lines by any clairvoyant. Further, as my pen is in my hand, let me name at once, on my part, your fellow-citizens, Dr. Sharpey, Dr. Locock, Dr. Williams, Dr. Todd, and Dr. Carpenter, or any two or more of them, to adjudge the matter with an equal number named by you.

Perhaps you will agree with me in thinking, that in settling a question of this nature, such a test and trial is better than any other five hundred arguments. Yours, etc., J. Y. Simpson.

Queen-street, Edinburgh, Sept. 15, 1851.

P.S. Is it necessary, after the preceding statement, to add, that you are again in error in reference to the miscalled "Mesmeric soirées". The object of the experiments comprised in this designation is to show, that many striking effects can be produced by the influence of the will of an individual, acting on another, independently of any magnetic, Mesmeric, or other supposed agency. These experiments are, therefore, directly and entirely opposed to the so-called doctrines of "Mesmerism".

Homœopathy at Manchester. The following paragraph we quote from the *Manchester Guardian* of September 20. We learn from various sources, that the profession in Manchester is distinguished for its uncompromising opposition, not only to homœopathy, but also to all other forms of unprofessional conduct. The false gloss put on some facts, and the misstatement of others, by the *Guardian*, is worthy of notice. We would also call attention to the great muster of parsons in the list of quack-fanciers. The clergy have always been famous for their support of charlatans. Old Burton wrote, about a century ago—"Many poor country vicars, for want of other means, are driven to their shifts—to turn mountebanks, quacksalvers, and empirics."

The following is the paragraph from the *Manchester Guardian:* "Homœopathic Students and the Medical Colleges. On Thursday morning, a meeting was held at the Homœopathic Institution, Bloom-street, to form a society for the protection of homœopathic students and practitioners against the proceedings of the medical colleges, which have lately refused to grant diplomas to students proposing to adopt the homœopathic practice, or have demanded the return of diplomas already granted, by practitioners who have adopted that mode of treatment. There were about thirty gentlemen present, and the chair was taken by Mr. W. R. Johnson. Mr. Phillips, M.R.C.S., in explaining the reason for which the meeting had been called, said that homœopathy first came prominently before the public in 1844, when Dr. Henderson, a professor of the University of Edinburgh, was led to investigate it, in order that he might be able to expose its fallacy. Instead, however, of finding it a system of quackery, as he had expected, he became convinced of its truth. About the beginning of the present year, the College of Physicians of Edinburgh, spurred on by the *Lancet*, a paper noted for the abusiveness of its language, had passed resolutions condemnatory of the practice of homœopathy. The University of St. Andrew's, too, stirred up by the same journal, had appeared in the field. Dr. Hale, of Norwich, had passed his examination, and received a degree from that university. By and bye, it came to the knowledge of some members of the university that Dr. Hale was practising homœopathy, and the return of his diploma was demanded by the senate. Dr. Hale did not return his diploma; but the ill-feeling excited against him by other professional men in Norwich, had compelled him to leave that town. The next case was that of Mr. Pope, who applied in April or May last for a degree from the University of Edinburgh. He had passed his examination with credit, when he was asked by Dr. Christison whether it was true that he intended to practise homœopathy. Mr. Pope replied that he intended to investigate that mode of practice, as he was not convinced whether it was or was not based on true science. His degree was refused to him, unless he became convinced of the falsehood of homœopathy. The *Lancet* had also succeeded in causing steps to be taken against homœopathy, which more immediately concerned the practitioners of Manchester. Within the last week or two, the Provincial Medical Society had passed resolutions condemnatory of the practice of homœopathy, and the surgeons had adopted them within the last week. The Medico-ethical Society of Manchester, too, had enlisted themselves in the cause, having addressed a memorial to the council of the Royal College of Surgeons, praying that the names of all members practising homœopathy, should be at once erased from the lists of the College. Under these circumstances, the homœopathic practitioners of Manchester thought that it was time that something should be done, and that they should protest against the steps taken to put them down. He moved—

"'That this meeting views with regret the course adopted by the colleges and other bodies to put down homœopathy, and denies and protests against the right of any corporate body or association constituting but a minority of the medical profession, to dictate to others what course of treatment should be adopted in their practice.'

"Mr. W. Armitage seconded the resolution, contending that, if there were free trade in food, there ought also to be free trade in physic.—The Rev. Mr. Durnford supported the resolution, which was unanimously agreed to.—Dr. Walker contended that homœopathists must obtain a royal charter or a legal enactment to put them on a level in the eyes of the public with their allopathic enemies. He moved—

"'That the course pursued by the universities, etc., towards homœopathic practitioners and students of medicine leaves them no other means of redress than the seeking to obtain a charter of incorporation of a college, which shall be empowered to confer degrees, and grant licenses to practise medicine.' It was seconded by Mr. Henry Dixon, and unanimously adopted.—Mr. W. P. Harrison, M.R.C.S.E., characterised the proceedings of the medical colleges as arbitrary and tyrannical, and moved—

'"That a branch of the General Association for the protection of Homœopathic Students and Practitioners be herewith organised, and that the following gentlemen be requested to act as a committee, with power to add to their number:—Mr. E. Phillips, M.R.C.S., chairman of committee; Dr. Robert Walker, L.R.C.S., Ed.; Dr. J. M'Dowall; Mr. W. P. Harrison, M.R.C.S.L.A.C.; Mr. W. Scholefield, M.R.C.S.; Mr. C. C. Tuckey, M.B.M.R.C.S.J.; Dr. Knowles, Mr. A. Pope, Mr. W. R. Johnson, Mr. G. Wildes, Rev. R. Durnford, Rev. Canon Slade, Rev. R. Fletcher, Ald. J. J. Parker, Rev. J. Gwyther, Rev. C. F. Smith, Rev. A. A. Bagshawe, Mr. W. M'Call.' Mr. C. C. Tuckey seconded the resolution.—The chairman, in putting it, stated that an association had been formed in London for the purpose of taking up this question in a firm and proper manner, which would no doubt terminate in the obtaining of a charter for a college, and that the society to be formed here was intended to act in conjunction with it. The resolution was unanimously agreed to, after which thanks were voted to the chairman, and the proceedings terminated."

[The steps now being taken to purge the medical profession from impostors, may probably give temporary buoyancy to quackery by the pretext which it affords for the raising of a mock cry of "persecution"; but let us remember that the question with us as honest men is, *not one of policy but of principle;* and that we must, at all hazards, make it impossible for the public to confound regular practitioners with quacks, even though disguised by diplomas obtained or retained by illegitimate means. Ed. Lond. J. Med.]

Homœopathy in High Places. It appears that Sir James Clark and Dr. Locock, (like many other orthodox physicians,) prescribe belladonna as a prophylactic against scarlet fever:—not, however, in infinitesimal doses. This proceeding, the *Lancet* states, is exulted in—why we know not—by one of the quack publications. There is a statement, however, quoted by the *Lancet* from the same quack paper, which, if true, is more important. We are quite aware of the culpable laxity which has prevailed regarding meeting with homœopaths; and, therefore, it is quite necessary for "those in high places" to state at least what they intend to do for the future. Even in Edinburgh, where homœopathic quacks cannot now be met professionally by Fellows of the Colleges, it was not always so. The following is the passage referred to: "The two eminent physicians (Sir James Clark and Dr. Locock) mentioned by our correspondent, have distinguished themselves by their gentlemanly forbearance, and their courteous demeanour towards their homœopathic brethren. Neither of them has ever made any difficulty of meeting in consultation, at the request of the patient, any homœopathic practitioner, not for the treatment, but for an opinion of disease."

The Branding of Deserters. We observe by a memorandum issued by the Horse Guards, dated August 19th, and published in *The Times*, that the medical officers are ordered in future to brand deserters with the letter D. This degrading service has hitherto been performed by the drummers. We trust no army surgeon will be so mean as to obey. No office is humi-

liating if performed in the cause of humanity; but the branding of deserters is evidently the execution of a savage sentence, which is quite incompatable with the character of a gentleman, and with the honour of our profession.

The Jenner Monument Committee. We are glad to learn that the Committee is now formed, and ready to receive subscriptions. The names, we understand, will be immediately published. In the mean time, it may interest our readers to learn that numerous additional letters of approval and adhesion have been received.[1] Had space permitted, we should have laid several of these interesting communications before our readers, as they have been kindly forwarded to us for that purpose: but in the present state of our pages, already so much occupied with matters of general intelligence, we are obliged at present to select one only from the many now before us.

Letter from Dr. Knox, *of Strangford, Ireland.*

Strangford, Downshire, Ireland, July 17, 1851.

Sir,—I feel much obliged by your application, and in reply beg leave to say, that I shall esteem it a great honour to have my name added to the list of the Committee, who are so laudably engaged in the attempt to raise a memorial worthy of the subject, to the memory of the great and good Dr. Jenner. At the same time, I may be pardoned for saying that it is little creditable to the age we live in, that this task yet remains to be performed.

No man, living or dead, has probably ever conferred a boon so inestimable and universal on suffering humanity; and the object the Committee have in view, surely requires nothing but sufficient publicity, to ensure its entire success. But, besides discharging a heavy debt of gratitude to Jenner's memory, the contemplated movement will, I trust, have the effect of directing anew the public attention to the great and unquestionable value of vaccination. Having in very recent times attempted, however feebly, to defend the doctrines of Jenner against objections, which appeared to me neither very wise nor very forcible, I indulge the hope that a renewed impetus may be given, by the plan the Committee have in view, to the practice of vaccination, which I ardently desire to see, not in partial, but in universal operation. When this shall have been effected, and not till then, shall we have the means of duly estimating what Jenner has done for mankind: and if the result should not be, as in the ardour of his benevolence he anticipated, to eradicate small-pox from the face of the earth, I feel pretty confident in stating, it will become more and more evident that his great discovery will form the best attainable safeguard against the horrors of that loathsome disease, and demonstrate anew the just claims of his memory to the gratitude and respect of the whole human race.

I have the honour to be, very faithfully yours,

E. V. Irving, Esq. Alexander Knox.

Dr. Mayne's Expository Lexicon. Dr. R. G. Mayne, of Leeds, has issued the prospectus of a work to be entitled, *An Expository Lexicon of the Terms, Ancient and Modern, in Medical and General Science; including a complete Medical and Medico-Legal Vocabulary.* From the specimen which we have received, and a portion of which we reprint, we perceive that Dr. Mayne has performed his task in a most luminous and scholarly manner. He presents the correct pronunciation, derivation, definition, and application of the names, analogues, synonymes, and phrases connected with medicine, and employed in Anatomy, Astronomy, Botany, Chemistry, Comparative Anatomy, Conchology, Crystallography, Entomology, Geography, Geology, Geometry, Ichthyology, Materia Medica, Medical Jurisprudence, etc., etc. Dr. Mayne announces that *his work is complete, and ready to go to press whenever the names of two hundred and fifty subscribers are obtained.* It is proposed to bring out the *Lexicon* in two forms; viz. 1. In six quarterly parts, the first to appear one month after this list shall be closed: 2. In one thick 8vo. volume, bound in cloth, price £1 10s.

[1] For copies of some of these letters *vide* London Journ. of Med. July 1851.

When we contemplate the immense labour which Dr. Mayne has so successfully bestowed upon the preparation of this great work, and when we remember that there is no similar work in our language, we do trust that many who read the lines we are now writing, will without delay place their names on Dr. Mayne's list of subscribers, which they can do at Churchill's in London, or by addressing the author at Leeds. We would recommend book-clubs to take it in. A number of individuals would thus have the benefit of perusing it as it appeared in parts; and some one would doubtless at the end of the year be glad to buy it from the club at the usual reduced rate. We would also suggest that Dr. Mayne might be materially assisted by his professional brethren, were they to mention the character of the work to clergymen, coroners, and naturalists, and others for whom it is also particularly adapted.

The following is a portion of one column of the specimen.

Abdomen, *ĭnis.* n. (*Abdo*, to hide; because the abdominal viscera are hidden within its cavity.) *Anat.* Name for the largest cavity of the human body; the belly or abdomen. *Comp. Anat.* Applied to the same region in the lower animals. Also termed *Venter.* See *Imus Venter*, *Mirach*, *Nadys*, *Sumen.*

Note.—In some dictionaries, *omentum* is added as a part of the derivation, to account for the last syllable of this word. The suggestion originated with Martinius, it is supposed, but was long ago shewn to be erroneous, that syllable being merely a termination of frequent use in the Latin, as *acumen*, from *acuo*; *foramen*, from *foro*, etc.

Abdom'inal. (*Abdōmen*, the belly.) *Anat.* Of, or belonging to, or in some manner connected with the abdomen or belly; ventral. *Abdōmĭnālis*, *is*, *e.*

Abdom'inal Aor'ta. *Anat.* Term for that portion of the aorta situated below the diaphragm.

Abdom'inal Aponeuro'sis. *Anat.* Term for the conjoined tendons of the Oblique and Transverse muscles on the anterior portion of the abdomen or belly.

Abdom'inal Gan'glia. *Anat.* A name for the semilunar ganglia, from their situation.

Abdom'inal Ring. *Anat.* Term for the fancied ring-like opening on each side of the abdomen, external and superior to the *pubes*, formed by the separation of the tendinous fibres of the lower portion of the external oblique muscle; transmitting, in the male, the spermatic cord, and in the female, the round ligament. *Annŭlus Abdōmĭnis.*

Abdŏmĭnāles. See *Abdominalis.*

Abdomĭnālis, *is*, *e.* (*Abdōmen*, the belly.) *Ichthyol.* Of or belonging to the belly or abdomen; ventral; applied to an Order (*Abdominales.* Nom. pl. f.) of fishes which have the ventral fins suspended to the under part of the abdomen, and behind the pectorals, without being attached to the bones of the shoulder: abdom'inal.

Abdominos'copy. (*Abdōmen*, the belly; *σκοπέω*, to observe.) *Med.* Term for the operation or mode of ascertaining the existence of abdominal disease by percussion mediate or immediate, by inspection, measurement, and manual examination. *Abdōmĭnoscōpia*, *æ.* f.

The Glascow Faculty and Insurance Companies. The following resolutions were adopted at a meeting of the Faculty of Physicians and Surgeons of Glasgow, held upon the 1st of September, 1851, in reference to the payment of fees to medical referees by Life Assurance Companies.

I. That this Faculty has long maintained the principle, that medical referees, the ordinary attendants of the parties desiring life assurance, ought to be suitably remunerated for their trouble in replying to the usual queries on behalf of the assuring companies; and that the parties granting the assurance ought to pay this fee, as it is obviously for their safety and guidance that such information is afforded.

II. That in conformity with these views, the Faculty, so long ago as 1st June, 1835, passed a law, requiring every member of their body to refuse replying to these queries unless a specified fee were transmitted alongst with the schedule, and this law has, from that time, been steadily adhered to and acted upon.

III. That in carrying out the above views, the Faculty regret being obliged to record, that till of late, with a few honourable exceptions, they have met with the most uncompromising opposition from the Insurance Companies, especially those of more early establishment; and although, within the last two years, several even of these have made a movement in the right direction, yet this has been so long deferred, and so obviously only a yielding to the pressure of circumstances, as to deprive the concession of much of its value.

IV. In this position of affairs, it has given the Faculty much pleasure to observe some of the more recently established Insurance Companies, not only frankly acknowledging the justice of the principle so long contended for, but spontaneously offering a liberal compensation to the members of the medical profession for the very valuable information and opinions it is not unfrequently in their power to afford; and to such companies the Faculty beg, in this public manner, to offer their best thanks.

V. The Faculty also take this opportunity of recording the sense they entertain of the important services done to the profession, in this matter of remuneration to private referees, by the editors of the *Lancet*, the *Medical Gazette*, and *Medical Times*, to whose intelligent and steady advocacy, they are aware, they mainly owe whatever favourable change that may have taken place in the conduct of the Assurance Companies towards the profession.

VI. The Faculty beg also to state, that whilst in 1835, in their anxiety to have the principle of remuneration established, they were indifferent as to the actual amount conceded; they now feel called upon, in justice to themselves, to intimate to the agents of all Assurance Companies, that the Fellows of their body will not, in time coming, pay attention to any schedule of queries submitted to them with a reference to any species of life assurance, unless such schedule of inquiry be accompanied by the fee of One Guinea, if the sum proposed to be insured exceeds £300, and 10s. 6d. if the sum is £300 or under.

VII. The Faculty order these resolutions to be printed, and copies sent to the editors of the London and Provincial Medical Press, to the agents of the various Insurance Companies, and to the presidents of the Royal Colleges of Edinburgh, and the other medical corporations throughout the kingdom, inviting their concurrence and cooperation.

Extracted from the Records of Faculty, by Laurence Hill, Clerk.

The Nairn Hospital. We have much pleasure in inserting the following letter.

To the Editor of the London Journal of Medicine.

Nairn, September 3rd, 1851.

Sir,—Your valuable articles on the Hospitals of London induce me to hope that you may consider the following communication worthy of insertion in your Journal.

The Nairn Town and County Hospital receives the invalided poor (medical and surgical cases) of the small town and county of Nairn: it has already proved a blessing to many. It is the first unendowed charity of the kind which has been established in so comparatively poor and limited a district of Scotland. It is upheld entirely by voluntary subscriptions, collections made in churches, donations of the charitable, and bequests. The history and progress of this hospital are interesting, and show how much good may be done by the perseverance and well-directed energies of a few. I would hope that the example will not be lost in places similarly, or more favourably situated, and equally destitute of the means of relief and comfort to the poor when on the bed of sickness and suffering.

The town of Nairn, with its population of 3,000, in the winter of the year 1842-3, was visited with a very fatal and infectious fever, prevailing principally, as usual, amongst the poor and labouring classes, and much in proportion to their wants, their visits and exertions towards their sick friends and neighbours, and their depraved habits of life: it was then that the idea of a small hospital for the town and county suggested itself, for general purposes; and more particularly as a provision for the recurrence of any similar epidemic. The scheme, however, was considered Utopian by most of the inhabitants, on account of the confined and comparatively poor state of the town and district. Such difficulties, however, did not daunt an energetic and persevering few, whose praiseworthy exertions in due time were crowned with success. They had ere long the gratification to behold the foundation laid of a chaste building, in the Italian style of architecture, capable of containing some thirty-two patients; and on the 12th of August, 1847, it was opened for the reception of patients.

Nairnshire was for many years deeply indebted to the Northern Infirmary at Inverness, for the almost gratuitous admission of her sick poor; and I would here reiterate the generally expressed opinion of the usefulness of this institution, whose benefits extend, not only over the town and county of Inverness, with her far-distant isles, but over the vast counties of Ross, Sutherland, and Caithness. In the above-mentioned emergency at Nairn, and in acute cases generally, the distance of sixteen miles proved often a barrier to the removal to Inverness of our sick poor; and it is a deep cause of thankfulness to them, and an advantage to the community at large, that an asylum is now open, where the sick poor can have every comfort and assistance that they require.

The plan, drawings, and specifications, were given by Messrs. Mackenzie and Matthews, architects, of Aberdeen and Elgin. The plan has been much commended by competent judges, as chaste in style, economical in execution, and most comfortable and commodious in internal arrangement; in fine, a model for a small hospital. Should any party be wishful for the plans, or information regarding them, the Treasurer of the Hospital will be happy to furnish them; and should this communication meet the eye of friends at a distance, or those favourable to the furtherance of this novel and laudable experiment, they may rely on the smallest donation being thankfully received and acknowledged. I am, Sir, your obedient servant,

John Grigor, M.D.

[If Dr. Grigor will kindly furnish us with the plan of his Hospital, and a statement of the expense of building and maintaining it, we will be happy to lay them before our readers.]

OBITUARY.

Badeley, J. C., M.D., Fellow of the Royal College of Physicians of London, Visiting Inspector of the Essex Lunatic Asylums, on the 22nd September, at his residence in Chelmsford. The circumstances of Dr. Badeley's death are very distressing; and they likewise point out how wrong it is for any one under the influence of pain, to handle dangerous drugs, or to mix a dose, when a slight error may cause a fatal result. We have seen more than one narrow escape, under circumstances precisely similar to those which occurred in this melancholy case. It appears that, in order to relieve a severe attack of tooth-ache, the deceased prepared for himself, and took, a dose of morphia, about 4 A.M. on Monday, 22nd September. Symptoms of narcotic poisoning appeared, and he died at 1 P.M., about nine hours after the accident. Dr. Badeley was widely known, and much respected.

Briggs, William, M.D., late of Ambleside, formerly of Liverpool, and also of Kendal, at Cheltenham, on the 18th September.

Briscoe, Dr., of the 59th Regiment, at midnight on the 22nd July, in consequence of the wreck of the *Pasha*, one of the Oriental Steam Navigation Company's fleet, which, by some as yet unexplained blundering, was allowed to come into collision with another steamer. Both vessels had signalled each other when several miles distant.

Budd, Thomas P., Esq., Surgeon, formerly of Newton Abbot, at Burra, Adelaide, South Australia, on the 7th April, aged 31.

Faithorn, John, M.D., of 14, Grosvenor Place, Bath, on 18th August, aged 78.

Gibson, John, Esq., Surgeon, and formerly Provost of Lanark, N.B., at 25, Bloomgate Street, Lanark, on the 8th September.

Kidd, John, M.D., at his residence, Oxford, on the 17th of September, after a few hours' illness. Dr. Kidd was Regius Professor of Medicine, Tomline's Prælector of Anatomy, Aldrichian Professor of Anatomy, and Radcliffe's Librarian. He was highly esteemed and respected, both in the University and city of Oxford. In 1809, being then a student of Christ Church, Dr. Kidd took the degree of M.A.; in 1801, that of Bachelor of Medicine; and in 1804, he proceeded to the degree of Doctor of Medicine. In 1822, Dr. Kidd succeeded Sir Christopher Pegge, Bart., in the office of Regius Professor of Medicine, to which is annexed Tomline's Prælectorship of Anatomy and the Aldrichian Professorship of Anatomy; and in 1834, he succeeded Dr. Williams as Radcliffe's Librarian. The election of a successor to the latter office rests with the Archbishop of Canterbury, the Lord Chancellor, the Chancellor of the University, the Bishops of London and Winchester, the two principal Secretaries of State, the two Chief Justices, and the Master of the Rolls. Dr. Kidd did good service in his time, as his publications testify, in various departments of mineralogical, chemical, and geological research; and about ten years ago—his last appearance, we believe, as an author—he put forth some observations on medical reform. Dr. Kidd was one of the eminent men selected under the Earl of Bridgewater's will to write one of the well-known Bridgewater Treatises; a work which, we believe, has gone through several editions.

White, Joseph, M.D., late of Banff, N.B., at Montreal, on the 8th July, aged 70. The deceased practised in the town of Banff for nearly thirty years, after having served as Assistant and Full Surgeon in the Navy, having been promoted after only three years' service. In Banff, he acquired considerable local celebrity as an accoucheur. He emigrated to Lower Canada in 1835, and settled at Huntingdon, Goodmanchester, county of Beauharnois.

Wright, Richard, Esq., Surgeon, Rotherhithe, on the 1st August, aged 79.

BOOKS RECEIVED.

Adams on the Prostate Gland. pp. 160. London: 1851. Bascome on Epidemic Pestilences. pp. 250. London: 1851. Milton on Bubo. [*Printed for private distribution.*] pp. 32. London: 1851. Roth on Movements. 8vo., pp. 302. London: 1851. Verral on the Spine and Paralysis. pp. 234. London: 1851.

TO CORRESPONDENTS.

Our thanks are due to unknown friends for the *Manchester Guardian* and the *Brighton Herald*, as well as for several pamphlets on quackery.

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ORIGINAL COMMUNICATIONS.

ON INJURIES TO THE EYE FROM SHOT, Etc.

By WHITE COOPER, Esq., Ophthalmic Surgeon to St. Mary's Hospital, etc.

There is a class of injuries to which sportsmen are especially liable, and which medical men are sometimes called upon to treat under circumstances the reverse of favourable. Upon these I propose to offer a few observations.

Cover shooting is a frequent source of injuries to the eye, from the circumstance of small shot being very liable to glance from the branches of trees in unexpected directions, and also from the eagerness of some sportsmen, who cannot resist a tempting shot, regardless of the proximity of others, whereby many persons have been blinded for life. Fragments of copper caps are another source of injury to these organs, though less frequently so than formerly, from the superior make of the caps themselves, and of the gun-locks; and, lastly, the eyes may be punctured or lacerated by thorns.

Injuries from Shot. The external effects produced upon the eyeball by a shot-pellet are, according to my observation, three in number. If the shot be spent, it will bruise and not penetrate the eye, causing considerable ecchymosis externally, and not unfrequently paralysis of the retina. If the eye be struck obliquely by the round pellet, it will glance off, cutting a little furrow which marks its course; but if the eye be struck point blank, or if the shot has been flattened or jagged by previous collision, the tunics will probably be penetrated, and the shot will lodge in the interior of the globe. The peculiarly tough structure of the sclerotic offers great resistance to the progress of a shot; hence, it frequently glances off altogether, if the outer side of the eye be struck, or lodges in the orbit, if the inner side. Those cases, in which a grain of shot pierces the eye, (except when fired at a very short distance), appear to be most frequent when the lid is struck in the first instance; as, for example, by a shot glancing downwards from the branch of a tree. Much, however, will depend on the angle of incidence and on

the velocity, whether the sclerotic be penetrated or not. The following is an illustration of the first description of injury.

Case. A man, æt. 32, was acting as "marker" to a party of sportsmen, and had ascended a tree to obtain a good view. A covey of partridges rose between him and the gentlemen, who were distant about one hundred yards, and on their firing at the birds, several shot struck about him, and one hit his left eye: the pain was at the moment acute, and the sight greatly impaired. He came under my notice two days afterwards, and I found considerable ecchymosis over two-thirds of the sclerotic, but no breach of surface. The frequent application of cold and astringent collyria speedily removed all traces of the blow; and the sight was gradually recovered.

Of injuries arising from over-eagerness, three examples have been seen by me; but as the main points were similar in all, the brief recital of one case will suffice.

Case. A party were beating a wood for pheasants, and in the excitement of several birds rising, a gentleman shot at one, without observing that another sportsman was in the line of fire. Three shot struck his face, and his left eye received one. As a wound in the eye was visible, great alarm was created, and medical assistance was promptly obtained. The impression was, that the shot had lodged in the globe, and such was the belief when the case was seen by me, some days subsequently. On careful examination, however, the groove which marked the course of the shot was clearly discernible: the eye had been struck about a line from the margin of the cornea, and there was quite the appearance, under a lens, of a piece having been chipped out. This was so far satisfactory, showing that the shot was not, as supposed, buried in the eye, and a fine probe, which traced the bottom of the wound in the sclerotic, rendered this certain. There was rather a smart attack of inflammation, but the case eventually did perfectly well.

When the eye has been struck by a shot, there is generally considerable ecchymosis, and the patient is much frightened; but our prognosis may be favourable if no shot-hole is visible, or if, by the assistance of a lens, the little groove above described can be discerned, though perhaps obscured by the effused blood; if, however, vision has been extinguished by the blow paralysing the retina, a cautious opinion, as to the restoration of vision, is advisable. The following case is interesting, from the severe effects produced by a small particle of gravel forcibly propelled against the eye; effects resembling those attendant on a shot-wound, which, for a time, it was believed by the patient to be.

Case. On the 18th of July, 1851, I was requested by Dr. Archibald Cockburn of Kensington, to visit a gentleman who had met with an accident on the previous day. He was playing at cricket with his sons, and a small fragment of gravel was struck up either by the bat or ball, and driven against his right eye with such force, that vision was instantly extinguished. The agony was intense, and the gentleman felt convinced that he had been shot. The most judicious treatment had been adopted by Dr. Cockburn; but, in spite of leeches, fomentations, etc., the pain continued, though in a less degree, and the patient passed a feverish and restless night.

On examination, much ecchymosis and considerable inflammation,

involving the sclerotic and iris, was apparent; the pupil was dilated and motionless, and the iris tremulous. Just at the junction of the cornea with the sclerotic at the inner side, a cut about a line in length was visible; and a gap at the ciliary margin of the iris at the same spot indicated that that membrane had been torn from its attachment. The pupil was displaced downwards and outwards, and a hand held up could be scarcely discerned.

Active antiphlogistic treatment was adopted, and every endeavour made by inunction and internal administration, to bring the patient under the influence of mercury. No effect, however, was produced, and the following report from Dr. Cockburn leads me to fear that the result of the case will be unsatisfactory. "I saw little of him after you went out of town, as he got impatient and used the eye freely, and went out against my warnings. He was never salivated, though he took a good deal of calomel. The eye was not improved, and he could barely distinguish my figure in the room; the pupil remained very dilated and angular."

When a shot penetrates the eye and lodges in the globe, the consequences cannot fail to be most serious. The following case occurred in the practice of Dr. Butter of Plymouth.

Case. A gentleman, aged 50, was struck by a shot in the left eye, and instantly lost the sight. His sufferings during the succeeding fortnight were not great, but then, and from time to time, during the four years and a half which preceded his application to Dr. Butter, the most agonising pain would shoot, like a flash of lightning, through his left eye and his head; and his sufferings, together with the disturbance produced in the vision of the other eye, led him to seek relief from operative measures. On the 9th of September, 1831, Dr. Butter extracted the lens of the injured eye, and found it to consist of calcareous matter and bone; some gritty matter was also syringed out, but no relief was afforded, and on the 23rd of February, 1833, Dr. B. proceeded to make another attempt to extract the shot. A portion of sclerotica was removed with scissors, and an aperture made sufficiently large to allow of the exploration with a probe of the cavity of the eye, the vitreous humour being evacuated; still no shot was found, nor was there alleviation of suffering; and, as a last resource, it was determined to extirpate the eye, which severe operation was performed on the 23rd of the following September. On the parts which had been removed being examined, a duck-shot was found impacted so firmly in the optic nerve, just at its junction with the retina, that some force was required to detach it. Ultimately, the case did well.

If the shot can be seen in the anterior chamber, there can be no hesitation as to the propriety of extracting it by an incision through the lower part of the cornea; but if it be hidden in the globe, all unnecessary poking or probing is to be strongly deprecated; no possible advantage can result from stirring up the vitreous humour with a probe in the hope of finding the shot, and such a proceeding cannot fail to deprive the patient of the faint chance of recovery he otherwise has. Under such circumstances, the room should be darkened, and the most absolute quiet enjoined; the head should be well elevated, and not allowed to move; the eye should be equally motionless, and the sound eye ought to be closed with a strip of plaster, to prevent

the other opening from sympathy; rags dipped in cold water should be applied to it; the bowels should be freely opened, and depletion practised according to the age and constitution of the patient.

Shots may lodge in the orbit: and when there, they give rise to distressing neuralgia, and have even caused symptoms of inflammation of the brain. The following case, which came under my notice some years ago, is remarkable, as showing by what a small body death may be caused, when the bones of the orbit are penetrated.

Case. Some children, in the neighbourhood of St. Bartholomew's Hospital, were playing with a sixpenny brass cannon, and to increase the report, had loaded it with a small piece of tobacco-pipe, scarcely bigger than a duck-shot. A little girl was standing a few paces from the muzzle of this toy, and when it was fired, she fell, and was carried into the hospital—dead. I was a student at the time, and have a vivid recollection of the embarrassment felt to account for the fatal result, as no wound was apparent; at length a speck of blood was noticed at the inner corner of one of the eyes, and on close examination, an insignificant puncture was discovered just within the lids. *Post-mortem* examination showed that the missile had struck that spot, glanced along the eyeball, and passing through the roof of the orbit, had buried itself deep in the substance of the brain.

Injuries from Fragments of Copper Caps. Fragments of copper cap will sometimes strike the eye and inflict serious wounds, of which I have seen several examples. Such cases were of frequent occurrence from imperfection in the construction of these implements when first invented, but they are less numerous now, and more frequently arise from exploding caps with a hammer, than from their legitimate use.

A young gentleman, aged 14, at one of the large public schools, was amusing himself and some schoolfellows with exploding copper caps by striking them with a hammer. A fragment struck his left eye, cut through the upper lid, and inflicted a formidable wound on the globe, immediately above the cornea. Medical assistance was obtained, but the youth concealed the truth, and stated that the wound was caused by a fall. The truth became known some months afterwards; and then the question arose, as to whether the fragment of the cap had remained in the eye or not, especially as a yellowish object was indistinctly visible in the wound. I saw him in June 1848, when the condition was as follows;—the globe was reduced in size about one-fourth, soft and boggy; the iris tremulous; the pupil was dilated and motionless, and vision was so far extinguished that there was barely perception of light. The wound in the sclerotic was filled by semitransparent material, through which a yellowish substance was perceptible. My first impression was that this was metallic; but on careful examination, with a lens and by a probe, I satisfied myself that such was not the case, and that it was merely coloured lymph. Although the eye had been acutely inflamed at the time of the accident, it had become quiet, and had been free from pain for some weeks. This circumstance, combined with the result of the examination, led me to conclude that the fragment of copper was not in the eye; restoration of vision was, however, hopeless.

Mr. Crompton, of Manchester, has detailed[1] the symptoms resulting from the presence of a fragment of copper in the eye, and my experience entirely accords with that gentleman's. The wound is generally clearly incised, heals rapidly, and for a period, varying from a few days to a month after the accident, the patients appear in a fair way of recovery; but at the expiration of that time, they are commonly suddenly seized with most acute pain in the eye, attended with extensive chemosis, swelling and redness of the lids, and frequently haziness of the cornea. The pain and acute symptoms may gradually subside, but will surely recur again and again, until the eye is brought into a state of chronic irritation, most distressing to bear, and not unfrequently leading to sympathetic irritation in the other eye, which may extend to destruction of vision.

The following is the plan of proceeding adopted by Mr. Barton, in whose practice seven cases occurred. It is equally applicable to a pellet of shot, or a fragment of copper cap, rolling loose in the eye.

The patient being placed in a convenient position, a large flap of the lower part of the cornea is to be cut as in the operation of extraction, but it must then be snipped off with a pair of scissors. The operation being acutely painful, and the eye irritable, chloroform may be advantageously employed. A linseed meal poultice is to be applied, and we may pretty confidently expect to find the foreign body in the poultice in the course of a few days; of course collapse of the globe is the consequence of the operation, but the disfigurement may be remedied by an artificial eye.

A shot becomes discoloured, and a fragment of iron is oxidised by remaining for some time in the eye, but the copper undergoes no change, and its edges continue as sharp and angular as at the moment of its entrance.

In the case above mentioned, the diminution in the size of the globe was a marked feature; and this is a common result of laceration of the sclerotic by a shot or a fragment of metal. The consistency of the vitreous humour is gradually lost at the same time that it becomes diminished in quantity. The colour of the iris is altered, and the membrane becomes tremulous; the globe shrinks to from one-fourth to one-third of its natural size, and as a visual organ the eye is rendered useless. If, however, the cornea be penetrated by a fragment of metal, it may fall into the anterior chamber, of which a case was related by me in the *Lancet* of 30th December, 1843; or it may pass through the iris, produce cataract by opening the capsule of the crystalline, and lodge deep in the eye. Dr. Mackenzie has repeatedly seen grains of powder propelled through the cornea into the lens, so as to cause cataract; and one case was very remarkable. A grain of powder, propelled through the cornea, traversed the lower part of the iris, in which it left a considerable opening, and striking the lens, produced cataract. Gradually the opaque substance cleared away behind the false pupil, and vision was restored. The natural pupil remained much longer cataractous, but at length it also cleared, and the patient saw well with a cataract glass.

A very remarkable case of recovery from a gun-shot wound of the

[1] London Medical Gazette, vol. xxi, p. 175.

eye is related by Professor Stœber of Strasburg, in the third volume of the *Annales d' Oculistique.*

Case. A child, seven years of age, was stealing fruit in a garden, when the owner fired at him, and wounded his right eye. The man was brought before the authorities, and declared in his defence, that the gun was only loaded with salt. Two experienced surgeons, after making an examination of the eye, reported that the wound had been more probably caused by salt than by lead. The man therefore escaped with a fine of twenty-five francs. Nearly a year afterwards, a foreign body was observed under the lower lid, on depressing which, a round black substance was discovered. The child was then brought to Professor Stœber, who found that the body in question was evidently a grain of shot, and that it was freely moveable between the conjunctiva and sclerotic, at the lower and outer part of the eyeball. There was a mark of a wound at the lower and outer border of the cornea, and corresponding to this, a circular lacerated opening in the iris. The pupil was immoveable, and vision was reduced to the mere perception of light.

The mother stated, that the eye frequently became red and painful, especially at changes of weather; and Professor Stœber considering that this irritability arose from the presence of the shot, decided to remove it, but was utterly foiled on several occasions by the restlessness of the child. The shot remained; nevertheless the eye gradually recovered, and sight returned to such a degree that very small objects could be discerned, though it never became as strong as the sight of the other eye. This case is highly instructive, showing that an amaurosis, nearly complete, and of more than two years' duration, can be removed by the unaided efforts of nature, notwithstanding the presence of a foreign body, which might have been expected to have kept up perpetual irritation. Such a result, though scarcely to be hoped for, offers encouragement in similar cases.

When there is a wound in the upper eyelid from any missile, it is important to ascertain whether the eye has been injured, a circumstance which may be overlooked by the attention being confined to the more conspicuous laceration. There may be a fragment left under the lid, or a wound in the upper part of the sclerotic, or even a fragment sticking in the coats of the eye. Demours mentions a case of this sort, where a double grain of shot passed into the sclerotic and remained fixed, one grain being without and the other within. The proper mode of proceeding is to direct the patient to look on the ground, and then to raise the lid by drawing up the integuments with the point of the finger towards the brow: a view of the sclerotic may thus be obtained; but if there be reason to suspect the presence of a foreign body between the eye and the lid, the latter should if possible be everted, or if this cannot be done, a stream of tepid water should be thrown under the lid by means of a syringe, whereby the substance will most probably be washed out.

Injuries from Thorns. These are far from uncommon in the country. If the thorn has penetrated the sclerotic, it should, if entire, be carefully drawn out; but if it has been broken, it becomes much more difficult to remove. I have had one such case, and the plan adopted

with success was as follows: having bound up the sound eye, and fixed the other with the points of the fingers of my right hand, a slight superficial incision was made with a sharp cataract needle on each side of the thorn, then with a pair of fine forceps it was grasped and smartly twitched out: the eye did perfectly well. A common consequence of a thorn striking through the cornea, is traumatic cataract; and it is singular to observe the rapidity with which opacity of the lens takes place. The injury is often followed by instant blindness; but that cannot arise from the mere injury to the lens, though I have seen it distinctly turbid one hour after it had been pierced by a thorn. This injury is attended with more pain than a gun-shot wound, and the subsequent inflammation is often of great severity.

Case. Mr. Thompson, residing near Ashbourne in Derbyshire, was struck by a thorn in the left eye on the 24th of February 1851, and instantly lost his sight. His right eye had been rendered blind twelve years previously by a wound from a fragment of iron. Severe inflammation followed both accidents; but though it was subdued in the eye last injured by the judicious measures adopted by Mr. Gregory, of Youlgrave, the patient continued blind. He was placed under my care last July, his condition being as follows:—the right pupil was blocked up with a mass of lymph strongly adherent to its margin, and it was drawn upwards and inwards; from the concavity of the iris, it was clear that the lens was no longer in existence. The left eye presented adhesions of the pupil to a soft capsulo-lenticular cataract. On the ninth of July, I opened the capsule in this eye, disturbing the lens but little; and not the slightest inflammation followed.

Professor Jäger, of Vienna, was then staying with me, and on the 20th of July he operated at my request on the right eye of Mr. Thompson; making a free incision through the sclerotic, he then introduced a pair of fine forceps, acted on by a spring, behind the iris, the opaque and very tough capsule, and seized and drew it out. For five days the progress of the case was everything that could be desired, but on the evening of the sixth day, violent inflammation set in, and in spite of the most active treatment, the pupil became closed again with lymph. Mr. T. returned into the country, and I did not see him until the 1st of October. On examination, it appeared that the cataract had entirely disappeared from the left eye, and there was vision through a small opening in the capsule. This was enlarged on the following day with a cutting needle, and he can now see very satisfactorily. It is proposed to make a central aperture through the lymph occupying the pupil of the right eye, when the organ is in a fit state for the operation.

A case once came under my notice, where the *hook* of an artificial fly had caught in the conjunctiva of the eye and had passed through the lid, just at the outer canthus: clumsy attempts had been made to extricate it, and a very awkward lacerated wound was the result. What should be the proper mode of proceeding in such a case? Obviously to push the hook forward until the barb is fairly exposed, then to snap it off with pliers or forceps above the barb. The shaft can then be withdrawn with ease.

There is one point with reference to wounds through the cornea to

which it is proper to direct attention. The immediate consequence of opening the anterior chamber is escape of the aqueous humour, whereby the iris, losing its support, falls forward, and is exceedingly liable to become entangled in, or adherent to, the wound, whereby the pupil becomes distorted, diminished in size, and incapable of performing its proper movements. Should this speedily ensue, the iris may often be disengaged by placing the patient before a window, and suddenly opening the eye; the natural action induced is powerful contraction of the iris, which draws it out of the wound. It is recommended by many writers to push the protruded part back with a probe; but so far as my experience extends, the bruising of the membrane by this proceeding is highly objectionable, as tending to excite iritis. The exposure to light three or four times, and belladonna subsequently, are at least safer, and probably quite as effectual as the other plan. An elegant mode of keeping the pupil dilated, is by rubbing upon the brow a solution of four grains of sulphate of atropine in half an ounce of glycerine. This is a more cleanly application than extract of belladonna; and it does not dry so readily.

In conclusion, I venture to offer the following remarks. If a surgeon be called to an injury of the eye, the organ should be carefully and gently cleansed from all blood and coagula, and once for all, fairly and thoroughly examined. This can be done with ease, and little pain at first; but if delayed till inflammation has set in, it will become both difficult and hazardous. If there be a foreign body in the eye, no time should be lost in extracting it if possible; if not, the patient should be kept quiet in bed, subjected to the strictest antiphlogistic discipline, and carefully watched. It should never be forgotten that the integrity of the organ depends on the *prevention* of inflammation, and that this is chiefly to be accomplished by the measures adopted within the first three days after the accident. The condition of the lids will be the criterion of the state of the eye; so long as they remain free from tumefaction and natural in appearance, all is going well; but not so, if a little puffiness appear at the internal angle, and gradually steal over the upper lid. There will then be some uneasiness in the eye, and the patient will complain of annoyance from scalding tears. If active measures have not been before adopted, not a moment should now be lost in resorting to them. Time is precious, inflammation is commencing, and every effort should be made to arrest its progress. The patient, if robust, should be bled from the arm, cupped from the mastoid process, or leeches may be applied there or to the temple. The cold wet rags must give place to frequent fomentations with hot water, and mercury, combined with a sedative, should be administered.

Such are the main features of treatment; but too much attention cannot be paid to the apparently minor points of absolute quiet, strict discipline, gentle handling, and little interference with the eye by opening it unnecessarily; and lastly, general careful watching on the part of the surgeon, that if mischief be threatened, it may be arrested at the very outset.

19, Berkeley Square, October 1851.

ON THE OBSTETRIC USE OF ERGOT OF RYE.

By GEORGE E. ELY, M.D.

(*Read before the Western Medical and Surgical Society of London, March 7*, 1851.)

In the brief remarks which I am about to submit, on the employment of Ergot of Rye in Parturition, I propose to offer the conclusions to which experience has led me, and do not profess to furnish either novel facts, or exact deductions from numerical details. Having been busily occupied in this department of practice for the last sixteen years, during which time I have personally delivered nearly 3,000 women, I have had ample opportunities for testing the maxims of my old preceptor, Dr. John Thatcher, of Edinburgh, on this point, and have never found them fail me. So little title to originality have I to boast of, that it would not have occurred to me to write at all on the subject, did not the cases which I read in the journals, and those which I occasionally see, convince me that many practitioners hold very loose opinions on the properties of the remedy, expecting from it more than it can perform, and exhibiting it when it can be potent only for evil. If a labour prove tedious, no matter in what stage of its progress, no matter what the cause of delay—and in spite even of faulty presentation—ergot appears by some to be given. In fact, *this* appears to be their only rule:—if labour is not terminated in half an hour after their arrival, a dose of ergot is to be administered. I have known it given,—by those who are well educated, and in other departments skilful,—in primiparæ, long before dilatation of the os uteri; and that even when the breech has presented. And I have known it to be given, with the head above the brim of the pelvis, the latter being deformed so much as to have made craniotomy necessary in former labours. Others, again, not knowing its proper adaptation, have denied it all power. Others, judging from the mischief arising from its improper administration, decline its use altogether, from a fear of its ill effects. But while, given wrongly, the consequences to mother and child may be most disastrous; if given rightly, it will often render operations with the forceps, or turning, unnecessary; and in some descriptions of hæmorrhage, may be the means of averting even death itself.

A consideration of the *action* of ergot, will render distinct and evident its nature as an obstetric instrument; and thus its powers, uses, and unsuitabilities, may be at once deduced. We may thus, also, see how and why it has occasionally been productive of ill effects on the mother or the child. I am not competent to enlarge on the minute physiological theory of its action. I speak as a man who professes medicine only as a practitioner; not, however, meaning hereby to undervalue a branch of science of which he confesses himself not a master.

The effect, then, of ergot of rye, given during labour, is to produce, in about twenty minutes after its administration, *propulsive contraction* of the uterus; differing from the natural expulsive pains in this re-

spect, that the intervals of ease will be either altogether absent, or very incomplete. Occasionally, if there is but little opposition, it will be a very powerful and continuous pain; or, on the other hand, it will be a quiet, tonic, slow, and steady propulsion, causing little or no expression of suffering, and lasting some time.

We see, then, immediately and exactly, the sort of case to which it is *suited*, and the sort of case in which it is *needed*. We see also how, when it is improperly administered, the serious consequences which have been ascribed to its use may really ensue. They must be, in a word, cases in which *a few strong expulsive pains* are required, and will be safe. The required pains must be *few;* for many ergotic pains, not having intervals, might rupture the uterus, or asphyxiate the child. It must be a case where *strong* expulsion is not undesirable, for the contractions resulting from ergot may be very strong.

In the first place, then, there must be no disproportion between the maternal pelvis and the fœtal head, for here a few pains and a short time cannot suffice. Therefore ergot is not to be used in any difficulty case. It must not be given before the os uteri is well dilated. It cannot, therefore, be suitable in the *early* stages of labour at all; far less, when the very cause of delay resides in rigidity of the os. It must not be given unless the vagina and perinæum are soft, moist, and well relaxed:—it can, then, be very rarely safe in primiparæ, especially if advanced in life. It cannot be applicable, unless the presentation is entirely favourable.

These rules appear so self-evident as to make it idle to repeat them. Yet I have seen them grossly transgressed; and I have often read in the journals, cases in which the authors narrate the exhibition of ergot under such circumstances as are deprecated above, without appearing at all aware of any impropriety in their treatment. If it is given in a case rendered tedious by the difficulty, nature will sometimes, fortunately, prove insensible to the action of the drug. But if not, the uterus will be roused to a violence of action, which will in all probability end in rupture: or if it should by fearful efforts accomplish delivery, the convulsive rigors which follow are tokens of the imminent risk which has been run.

When there is rigidity of the os uteri and soft parts, results so fatal may not occur; but the patient will become exhausted by misplaced and ineffectual attempts at expulsion; the rigidity and dryness will increase; a feverish state will be produced; and, after the subsidence of ergotic pain, natural pains will be slow in returning. And such are cases in which I have seen ergot fatal to children, whose vitality has not been proof against the long-continued and unremitting compression.

Probably none will be found so mad as to administer ergot in presentation of the *upper* extremity. But neither is it applicable to a foot or breech presentation; for here it is often only after the slow, gradual, and dilating passage of the hips, that we can hope to extricate the head sufficiently speedily to save the child. Even where the *head* is the presenting part, malposition will often forbid the use of ergot; as that would frequently be an infringement of the maxim,—that *few* pains must be requisite for the completion of labour.

I must also confirm that which Dr. Hardy, of Dublin, in an interesting and important paper on this subject, has stated; that ergot will sometimes produce very serious depression of the pulse, where the patient has already been weakened by very great hæmorrhage, or previous profuse diarrhœa.

After what I have said, few words will suffice for pointing out in what cases ergot is a suitable means. And if from those in which it may be given safely, we subtract those in which it is not required, very few will remain. I myself so seldom require it, that I have never carried any about with me. Doubtless, there are many cases where no possible harm could arise from its administration, and where the suspense of the patient, and the time of the accoucheur, may be unobjectionably spared by employing it; but my own custom on such occasions is, to submit to the tediousness and inconvenience, and exhibit simply "tincture of time". Herein, every one must act as he thinks right.

But when, in a woman who has already been a mother, the head has rested on the perinæum for two or three hours, waiting only for the final extruding pain, it is folly to withhold what will then be so speedy, so safe, and so welcome an interference. And I have known that, occasionally, in elderly women, where only *one* pain is wanted, that one pain *will* not come; and either ergot must be given, or the forceps at last applied.

In cases where, in the last stage of labour, the expulsive pains are feeble and infrequent, serious hæmorrhage will very often follow; and this untoward sequence is almost always to be prevented by the exhibition of ergot, in the manner proposed by Dewees, and so ably expounded by Dr. Beatty, of Dublin.

But the case in which ergot is most strikingly beneficial, and I may say most necessary, is that of partial presentation of the placenta. Here, until the os uteri is considerably dilated, the hæmorrhage can only be stayed by the plug, which will do so effectually. But when the os is tolerably open, thin, and soft, the yielding surface of the membranes will not afford a counter-pressure to the plug, which is then no longer efficient. They may also give way without our knowledge, and then we shall have internal hæmorrhage. If we now rupture the membranes, the descent of the head will so compress the lacerated vessels, as to place the patient in safety. But we cannot depend upon the continuance of sufficient contraction of the uterus to keep up this compression; and the intervals of pain will permit a considerable draining. Here, then, if the symptoms are urgent, there would be no remedy but turning; a measure painful and exhausting to the mother, hazardous to the child, and perhaps difficult to the operator. But ergot supplies, as I can aver, an admirable and a competent aid. Let a full dose be given, and the membranes ruptured, and the happy results will be, a cessation of hæmorrhage and a speedy delivery; or, at all events, such a degree of tonic contraction of the uterus will ensue, as will keep the patient out of danger.

Dr. Ramsbotham recommends the administration of ergot as a preliminary step in the induction of premature labour. In the few cases of this kind which I have treated, I have derived no assistance from

it; and I do not think that the non-parturient womb is very susceptible of its stimulus. Nor can I say that I have found the ergot very effective, when given after delivery, in atonic hæmorrhage; although I willingly defer to the contrary opinion held by many distinguished accoucheurs.

Rochester, February 1851.

ON THE RELATIONS OF UTERINE TO CONSTITUTIONAL DISORDER.

By F. W. MACKENZIE., M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

Of those who have devoted themselves to the study and investigation of morbid phenomena, we may recognize two principal classes. The one, looking more especially to the alterations of structure which are occasioned by disease, endeavour to deduce from them and the study of their specific characters, anatomical, chemical, and physical, the laws which regulate their development, and the principles which should guide us in their prevention and cure. The other, looking beyond the mere structural changes themselves, seek to determine their mode of origin and formation by an examination of their causes, the circumstances by which they have been preceded, and the order and sequence of morbid actions. Each of these methods of inquiry has its advantages, whilst both are conducive to the extension of medical science; and while it would be invidious to draw any parallel between their respective merits, we may at least admit the importance of that which, by teaching us the incipient phenomena of disease, enables us to anticipate and avert those ulterior changes of structure which, when met with, are but little amenable to the resources of our art.

But in such investigations, it is necessary to carry our inquiries beyond those limits which custom or system has arbitrarily assigned to particular diseases. It is necessary to study closely the first deviations from health; to trace morbid actions from their more determinate to their more primitive conditions; and to note the order and succession of changes by which constitutional disorder becomes localised, and local disorder passes into organic disease. For it is too evident, that morbid action may have commenced before sensibility warns us of its existence, and that the mere perception of pain or uneasiness, or, indeed, of any sensible deviation from what is normal in a part, cannot be regarded as the commencement of disease. This may have begun long antecedently; and inquiry in such cases will often show that it had been attended by appropriate symptoms, which, if carefully sought

for and recognised in other instances, would enable us to avert those consequences which would otherwise ensue.

In the prosecution of this subject, much may be gained from physiology, for it is to the point at which physiological actions become pathological, that our inquiries should be mainly directed. Much, again, is to be learnt by collecting the histories of individual cases; and this should comprehend, not only their immediate symptoms and causes, but their remote antecedents also. By studying the particular circumstances or combination of events, which may have preceded or given rise to any particular lesion, we are enabled to anticipate its occurrence whenever similar circumstances cooperate; and this knowledge is eminently equivalent to power; with such power, medicine may claim to rank foremost among those sciences which have contributed most largely to the happiness and welfare of mankind. The knowledge of the past becomes our guide and security for the future; and in proportion as we have diligently watched and followed and correctly interpreted the workings of nature, are we enabled to direct, to modify, or control them, and thus to minister most successfully to the wants and necessities of our fellow creatures.

The relations which subsist between uterine and constitutional disorder have not, as it appears to me, been satisfactorily determined, nor have they received, perhaps, that degree of attention which the importance of the subject merits. According to the most recent doctrines which have been put forward, uterine disorder is sufficient to take the initiative in all those morbid conditions, constitutional as well as local, which are met with in the progress of uterine disease; and consistently with this view, the rule of practice has been to direct measures primarily and specifically to the uterine organs. The precise nature of the uterine malady has not, indeed, been clearly settled;—by one it is considered as congestive, by another as inflammatory and ulcerative, by a third as neuralgic, and by a fourth as a kind of mechanical displacement; but all agree in regarding it as of primary importance, and as the *fons et origo* of any coexisting disorders. Whether, however, such views are correct, or, at all events to the extent which has been contended for by some, may, I think, admit of reasonable doubt. I do not deny that uterine disease, when fully established, may react injuriously upon the constitution, or that some organs may suffer in the general reaction more than others; but if our inquiries are directed to the early history and mode of origin of such diseases, we shall find, I think, many reasons for believing that this is constitutional rather than local; that, whilst irritative disorder has preceded vascular disease, that this has mainly resulted from constitutional causes, and that it is less the reaction of the uterine malady upon a healthy than upon a disordered constitution, which gives rise to those complex and often intractable maladies which are sometimes met with in connexion with uterine diseases. The question involved in this inquiry is one of considerable practical importance; for if, on the one hand, it should appear that uterine disorders are for the most part local and isolated affections, and arise irrespective of general causes, it must follow that treatment of a local character, if not exclusively, must be chiefly required, and that the constitutional disorder will cease with

the uterine. If, on the other hand, it is true that uterine is generally preceded by constitutional derangement, and is mainly dependent upon it; then it must equally follow, that treatment, to be successful, must be addressed principally to the latter, and more subordinately to the former.

Those who have adopted the first of these views, and who look to uterine derangement as being for the most part idiopathic, and as initiating other disorders, and who regard the cervix uteri as the chief seat of the majority of uterine diseases, would seem to attach primary importance to the physical appearances which it presents under difficult circumstances, and have associated with many of them the presence of inflammation. In some instances however, it is possible that they may have interpreted these according to preconceived views of their nature. I say this, because the significance of certain appearances presented by the cervix in different cases has not as yet been clearly determined. In regard to the diagnostic characters of inflammation, there is confessedly much difference of opinion, and there is still more as to those of ulceration. But in determining the nature of any physical changes which may be met with in an organ, it is necessary to take into consideration the general and local symptoms with which they are attended, in order to arrive at correct conclusions, for the mere anatomical characters of inflammation may be present without inflammation actually existing. Now, on this point, the cases under consideration possess no kind of uniformity. I have met with some in which inflammation and ulceration had been diagnosed after ocular examination, in which there was neither local pain, uneasiness, or functional disorder, or any febrile or constitutional derangement. In some instances, it is admitted that the general health has been perfectly good, where the cervix has presented the so-called appearances of inflammation; and they have been met with after death in persons who had died of other diseases, and who had never experienced any uterine pain, derangement, or uneasiness. Now such facts are calculated to shake our confidence in the inflammatory nature of *some* of these appearances of the cervix. I do not doubt the necessity or the importance of making an ocular examination of the uterine organs in cases of doubtful disease; but in estimating the character of the appearances which are observed, we should proceed with much caution, and with a due attention to the general and local symptoms which are met with in each case. In this country the subject of the physical characters of inflammation has been very carefully investigated by Dr. Yellowley, in an essay on the vascular appearances of the stomach, published in the *Medico-Chirurgical Transactions*, and he has shown that all the characters of true inflammation may be met with when no such disease could have existed. They were found in an intense degree in the mucous membrane of the stomach in healthy criminals who were executed in the prime of life, and in patients who had died of other diseases, quite unconnected with any affection of the stomach. He observes also very truly, "that in judging of the existence of external inflammation in the living body, it is not by mere redness or turgescence of vessels that the opinion is guided, but by those circumstances in conjunction principally with pain, heat, and

swelling. It does not therefore appear to be less necessary, he observes, for the purpose of enabling us to judge of the existence of internal inflammation, that *something unequivocal in the symptoms* should be superadded to the *appearances* submitted to our consideration, than that there should be assistance required in judging of external affections in addition to mere colour or vascularity." The conclusions which Dr. Yellowley has arrived at on this subject have generally been assented to by the pathologists of this country, who avail themselves of his investigations in deciding upon the inflammatory nature of the physical appearances which are met with in different organs. The uterus can be no exception to their truth; and bearing them in mind, we may venture to doubt whether the appearances which have been attributed to inflammation of the cervix may not in some cases have another origin, and be indicative of other pathological conditions.

Again, in accounting for the origin, and the supposed frequency of these inflammatory lesions, we are referred by some writers to the anatomical and physiological characters of the uterine organs, to the vascularity of the cervix, the presence of cellular tissue in it, and the peculiar functions which these organs are destined to fulfil. But surely in such views there must be some fallacy. It is scarcely consistent with the usual providence of nature, to suppose that such susceptibility to disease should be the necessary consequence of the due performance of the ordinary functions of an organ; and when a writer gravely tells us that the function of parturition cannot take place without inevitably, in many, if not in all cases, being accompanied by erosion, laceration, and contusion of the lining membrane of the cervix, we are tempted to inquire if this can really be so; and whether this can truly be said of the organ—the contemplation of which of old inspired Galen with such wonder and admiration, and which Swammerdam, many centuries afterwards, described as the *miraculum naturæ*. I do not think that all can participate in such views; there must be many who believe that the uterine organs have been constructed so as to be adequate to the proper performance of their allotted functions, and who are disposed to look elsewhere, than to their anatomical and physiological characters, for an explanation of the source of their morbid actions.

But, on the other hand, it is a well-established fact, that local diseases may arise exclusively from derangement of the general health—from morbid conditions of the blood—irritative disorder of organs which have extensive sympathies and abnormal states of the nervous and ganglionic centres. This principle was strongly inculcated by Abernethy, is in harmony with the doctrines of Hunter, and has been practically recognized by a host of English practitioners. A due appreciation of it has, moreover, led to very valuable results in practice. It has taught us to look beyond the mere appearance of things; to trace morbid actions up to their remote origin or source; and thus to arrive at more rational and successful modes of treatment. Upon this principle, we are often able to connect local diseases with causes with which at first they would appear to have but little connexion, and the application of this doctrine is daily becoming more extended, as our knowledge of the nervous system and of physiology generally is ad-

vanced. "I must confess," says Sir Benjamin Brodie, "that, in proportion as I have acquired a more extended experience in my profession, I have found more and more reason to believe that local diseases, in the strict sense of the term, are comparatively rare. Local causes may operate so as to render one organ more liable to disease than another; but everything tends to prove, that in the great majority of cases there is a morbid condition, either of the circulating fluid or of the nervous system, antecedent to the manifestation of disease in any particular structure. Moreover, even in those cases in which a disease may be distinctly traced to some kind of mechanical injury, the character which it assumes depends as much on the state of the general health as on the injury itself."[1] By substituting for the general terms here employed, those which are significant of the particular diseases under consideration, we have in this passage those opinions clearly expressed, which it is the principal object of this paper to elucidate.

In considering how far this purpose could be best attained, and the relations of uterine to constitutional disorder most correctly determined, it has occurred to me to take a given number of uterine cases, to tabulate their principal antecedents and concomitants, and to observe their order, connection, and sequence. The subjoined table has been framed upon this plan; but I am aware that in constructing it I have not attained that degree of accuracy in its details which could be wished, and which is so necessary in inquiries of this kind. In questioning patients as to their state of health antecedently to any particular malady, it is extremely difficult to obtain from them satisfactory information. On casual inquiry, they will often say that they had been perfectly well, when, on further questioning, they will admit that they had been far otherwise. In soliciting information from patients respecting their maladies, I am also aware that the inquirer is apt to put questions which are calculated to elicit partial information, and such as may be favourable to certain preconceived views. This error I have also endeavoured to guard against in taking the histories of the cases from which this table is constructed, and I have sought to obtain the real facts connected with them, without being influenced by any particular bias. Indeed, when I commenced these inquiries, I had none whatever; and any opinions I may now entertain on the subject of uterine diseases, have entirely resulted from a consideration of facts which have come under my observation. Some of these I have endeavoured to analyse and embody in the subjoined table, in the hope that they may serve to throw some additional light upon the pathology and early history of uterine disorders. I have selected a hundred cases, because that number appeared to me to be sufficient to form a basis for comparison. I could have extended the number, but it did not appear to me that my object would have been materially advanced by doing so.

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[1] Brodie, Sir B., Diseases of the Joints, p. 25. *Fifth Edition.*

[*Table*

No.	Name.	Age	Uterine Disorder.	Antecedents.	Concomitants.
1	E. S.	69	Carcinoma, metrorrhagia	Long continued mental anxiety, dyspeptic symptoms, nervous derangemt.	Gastro-hepatic and intestinal disorder, asthenia
2	I. O.	21	Dysmenorrhœa, leucorrhœa	General ill health, nervous depression & weakness, dyspeptic symptoms	Dyspepsia, with marked hepatic and intestinal derangement
3	C. G.	40	Carcinoma, metrorrhagia	Severe trouble, mental uneasiness, marked dyspepsia, nervous prostratn.	Anæmia in a marked form, with gastro-intestinal disorder
4	H. P.	45	Hysteralgia	Mental anxiety and trouble, dyspepsia, and gastrodynia	Well-marked dyspeptic symptoms, and spinal irritation
5	S. S.	39	Metrorrhagia abortus	Great ment. uneasiness, agitation, dyspeptic symp.	Anæmia and derangement of digestive organs
6	S. C.	25	Leucorrhœa, dysmenorrhœa	Over fatigue, disturbed sleep, nervous prostration, dyspepsia	Anæmia, spinal irritation, hysteria, dyspeptic symptoms
7	M. L.	17	Leucorrhœa	Weakness, nerv. prost., and dyspeptic symptoms	Anæmia, gastro-hepatic derangement
8	E. S.	25	Profuse leucorrhœa, dysmenorrhœa	Much mental uneasiness, languor, and general weakness, dyspept. sympt.	Anæmia and general derangement of the digestive system
9	S. G.	38	Hysteralgia, leucorrhœa, dysmenorrhœa	Mental uneasiness, dyspeptic sympts., gen. weakness, ill health, rheumat.	Anæmia, gastro-intestinal derangement, nervous headaches
10	A. W.	34	Leucorrhœa	Bad health generally, dyspepsia	Nervous debility and dyspepsia
11	M. S.	49	Metrorrhagia, carcinoma	Severe & long continued mental anxiety, dyspepsia	Anæmia, severe dyspepsia, spinal irritation
12	M. M.	36	Leucorrhœa	General weakness and ill health, dyspepsia	Anæmia, dyspept. symptoms, severe gastrodynia
13	M. C.	26	Leucorrhœa, menorrhagia	Derangement of the digestive organs.	Derangement of the digestive organs
14	J. W.	21	Leucorrhœa	Hæmorrhage post part., gastro-intestinal disorder	Anæmia, asthenia, gastro-intestinal disorder
15	C. W.	36	Leucorrhœa, menorrhagia	Long-continued dyspepsia.	General derangement of the digestive organs
16	E. S.	22	Hysteralgia, leucorrhœa	Dyspepsia, much intestinal derangement	Anæmia, spinal irritat., gastro-intestinal disorder
17	S. K.	25	Hysteralgia, irreg. menstruation, leucorrhœa	Weakness, nervous depression, and dyspepsia	Anæmia, disorder of the stomach and digestive organs
18	E. C.	23	Leucorrhœa, amenorrhœa	Over fatigue, physical exhaust., dyspeptic symp.	Anæmia, gen. debility, gastro-intestinal disorder
19	C. B.	33	Leucorrhœa, hysteralgia	Protracted suckling in the case of two children, dyspep. symps., weakness	Anæmia and severe dyspepsia
20	M.A.H	31	Leucorrhœa	Bleeding and salivation for pleurisy, hæmorrhage post partum, dyspepsia	Well-marked anæmia, gastro-intestinal disorder
21	M.A.P.	24	Leucorrhæa	Anxiety, trouble, dyspep.	Anæmia, dyspepsia
22	R. L.	22	Amenorrhœa	Residence in a damp and unhealthy situation, gen. debility and dyspepsia	Anæmia, feverishness, dyspeptic derangement, bronchocele
23	E. E.	21	Metrorrhagia hysteralgia	Labour two months ago, the digestive organs subsequently disordered	Anæmia, marked disorder of the stomach and digestive organs
24	M. W.	36	Irritable uterus	Difficult labour, attended and followed for some time by hæmorrhage, extreme weakness, dyspeps.	Anæmia in a severe form, great derangement of the stomach and digestive organs

No.	Name.	Age.	Uterine Disorder.	Antecedents.	Concomitants.
25	M.A.H	31	Leucorrhœa	General ill health and weakness, dyspepsia	Anæmia, disorder of the stomach & digestive orgs.
26	M.A.B.	15	Amenorrhœa	General weakness and nervous prostration	Well-marked anæmia, disord. stom. & digest. org.
27	E. M.	30	Leucorrhœa, hysteralgia	Several labours attended with much loss of blood, gen. weakness, prostration	Anæmia, dyspepsia, piles, and hæmatemesis
28	M.A.M	23	Leucorrhœa	Weakness, nervous symptoms, dyspepsia	Anæmia, considerable disorder of the stomach, and digestive organs
29	C. P.	30	Uterine hæmorrhage at the 7th month of preg.	Anxiety and uneasiness of mind, dyspeptic symptoms	Sickness and great disorder of the stomach and digestive organs
30	M. R.	17	Amenorrhœa	Weakness and dyspepsia, much disorder of the stomach and bowels	Anæmia, great disorder of the stomach and digestive organs generally
31	A. S.	40	Irregular menstration and leucorrhœa	General ill health, prostration, disordered stomach and bowels	Anæmia, diarrhœa, much chylopoietic derangement
32	E. J.	44	Hysteralgia, leucorrhœa	A very severe illness, weakness, nervous symptoms, dyspepsia	Anæmia, asthenia, and dyspepsia
33	E. J.	51	Leucorrhœa	Much trouble & anxiety, bad living, tongue long disordered	Weakness, dyspepsia, nervousness
34	E. K.	44	Metrorrhagia	Severe attack of cholera, subsequently pregnancy, attended with much weakness and gastro-intestinal disorder	Extreme anæmia, marked disorder of the stomach and digestive organs, nervous symptoms
35	S. Y.	50	Leucorrhœa	Much anxiety of mind, dyspepsia	Bad gen. health, disordered stomach, nervous symptoms, rheumatism
36	E.W.	25	Hysteralgia, leucorrhœa	Weakness, languor and nervousness, bad health, much disorder of stomach and bowels	Anæmia, great disorder of the stomach and digestive organs
37	S. M.	30	Hysteralgia, leucorrhœa	Mental anxiety, over fatigue, languor, weakness, and depression	Anæmia, disorder of stomach and digestive organs, spinal irritation
38	M. M.	21	Scanty menstruation, leucorrhœa	Bad general health, nervous symptoms, weakness, bad morning tongue	Anæmia, disorder of stomach and digestive organs
39	S. S.	20	Leucorrhœa	Weakness, nervous symptoms, dyspepsia	Anæmia, disord. stom., and digestive organs
40	E. M.	27	Hysteralgia, leucorrhœa	Dyspepsia	Anæmia, disord. stom., and digestive organs
41	M. T.	25	Leucorrhœa	Rheumatic complaints	Anæmia, rheumatism
42	J. S.	35	Hæmorrhage post partum	Mental excitement, rheumatism	Anæmia, and rheumatism
43	A. D.	40	Suppres. mens., hysteralgia, leucorrhœa	Acute disorder of stomach and digestive orgs. prior to menstruation	Great derangement of the stomach and digestive organs
44	M. S.	37	Hysteralgia, leucorrhœa	Weakness, nervous symptoms, and dyspepsia	Anæmia, disorder of stomach & digest. organs
45	J. J.	38	Suppres. mensium	Irregular menstruation, four very difficult labours, each attended with considerable flooding, mental anxiety, and indigestion	Anæmia, much disorder of the stomach and digestive organs

No.	Name.	Age	Uterine Disorder.	Antecedents.	Concomitants.
46	A. B.	18	Suppressio mensium	Irregular menstruation, general weakness and prostration, dyspepsia	Anæmia, much disorder of the stomach and digestive organs
47	M. A. N	18	Amenorrhœa, leucorrhœa, hysteralgia	Always had indifferent health, had small-pox at 12, has never been well since; weakness, and a bad tongue on awaking	Anæmia, great disorder of the stomach and digestive organs
48	M. C.	53	Leucorrhœa	Dyspeptic symptoms, rheumatic attacks, weakness, and gen. ill health	Anæmia, disorder of digestive organs, rheumatism
49	M. B.	21	Menorrhagia	Disorder of the stomach & digest. organs brought on by sea-sickness	Very great disorder of the stomach and digestive organs generally
50	J. V.	38	Metrorrhagia, fibrous enlarge. of uterus reaching to umbilicus	Considerable mental anxiety, constitutional weakness, occasioned by cholera, dyspeptic symps.	Marked anæmia, disorder of stomach and digestive organs
51	S. W.	34	Hysteralgia, dysmenorrhœa, leucorrhœa	Protracted suckling, weakness, dyspepsia	Anæmia, disorder of stomach and digestive organs
52	M. A.	32	Hysteralgia, menorrhagia, leucorrhœa	Bad general health, weakness, dyspepsia	Anæmia, disorder of the digestive organs generally, spinal irritation
53	M-A-W	23	Hysteralgia, suppres. mens., leucorrhœa	Protracted suckling, general weakness and prostration, dyspeptic symptoms	Anæmia, much disorder of the digestive organs generally
54	E. L.	25	Hysteralgia, dysmenorrhœa, leucorrhœa	Much mental anxiety, bad general health, weakness, and dyspepsia	Anæmia, disordered stomach and digestive organs, spinal irritation
55	A. H.	38	Irreg. menstruation, profuse leucorrhœa	Anxiety and trouble	Anæmia, general weakness and prostration, disorder of digestive organs
56	J. T.	38	Irregular menstruation, profuse leucorrhœa	Mental uneasiness, long residence in a tropical climate, general prostration, and dyspepsia	Marked anæmia, and great disorder of the digestive organs
57	P. W.	35	Hysteralgia	Mental uneasiness, much disorder of the stomach and bowels	Asthenia, depression, great disord. of stomach & digest. orgns., spinal irrit.
58	C. W.	31	Hysteralgia, dysmenorrhœa, leucorrhæa	Mental anxiety and trouble, five very difficult labours, preceded by much disorder of digest. organs	Anæmia, spinal irritation, great disorder of the digestive organs
59	E. S.	23	Irregular menstruation, leucorrhœa	Never had good health, menstruated at 18, previously to which, and subsequently, the digestive organs have been disordered; 16 months ago was much frightened, uterine ailments have been much aggravated since	Anæmia, dyspeptic symptoms, intestinal disorder, spinal irritation
60	S. M.	20	Hysteralgia, irreg. menstru., leucorrhœa	Anxiety and mental excitement, dyspeptic symptoms	Anæmia, disordered stomach and digestive organs, spinal irritation
61	S. H.	32	Metrorrhagia, miscarriage	Anxiety, dyspeptic symptoms, weakness, and nervous depression	Anæmia, disorder of the digestive organs

No.	Name.	Age.	Uterine Disorder.	Antecedents.	Concomitants.
62	M.A.H	30	Dysmenorrhœa, leucorrhœa	Bad general health, depression, dyspepsia	Anæmia, disor. of digest. orgs., gen. weakness and depress., spinal irritation
63	R. G.	24	Metrorrhagia	Two months after labour, attended and preceded by much mental anxiety, dyspepsia	Anæmia, disorder of the digestive organs
64	L. F.	36	Hysteralgia, dysmenorrhœa, leucorrhœa	General health very bad, anxiety & trouble, dyspepsia, weakness, depression	Anæmia, disorder of digestive organs, spinal irritation
65	M.A.B.	17	Amenorrhœa	Bad health, anxiety, great fatigue, dyspepsia, weakness, and depression	Great disorder of digestive system, intense anæmia, nervous symptoms, and spinal irritation
66	E. M	21	Hysteralgia, leucorrhœa	Weak, low, and generally out of health	Anæmia, disorder of digest. organs, & spinal irrit.
67	A. B.	36	Irregular and painful menstruation	Bad general health, anxiety & trouble, weakness and depression	Anæmia, great derangement of the digestive organs, and prostration
68	S. W.	27	Profuse leucorrhœa and dysmenorrhœa	Very bad health, dyspepsia	Anæmia, dyspepsia, dysuria
69	E. P.	28	Menorrhagia, leucorrhœa	Great weakness & very bad health, anxiety of mind and dyspepsia	Anæmiated, disorder of digestive organs, spinal irritation
70	M. N.	43	Hysteralgia, dysmenorrhœa	Very bad health, much ment. anxiety, dyspepsia, very difficult labour	Anæmia, disorder of digestive organs, spinal irritation
71	E. E.	27	Hysteralgia, irreg. menstrua., leucorrhœa	Weakness and depression	Anæmia, disorder of digestive organs
72	S. W.	45	Hysteralgia, leucorrhœa	Great anxiety, very bad health, and severe labour	Anæmia, disorder of digest. organs, spinal irrit.
73	S. N.	26	Hysteralgia, irreg. menstrua., dysmenorrhœa	Bad health, dyspepsia	Anæmia and disorder of the digestive organs
74	S. W.	33	Hysteralgia, profuse leucorrhœa, dysmenorrhœa	Great mental anxiety, hæmorrhages after labours, general prostration	Anæmia, disorder of digestive organs, spinal irritation, hysteria
75	E. N.	28	Hysteralgia, dysmenorrhœa	Much anxiety, bad health, dyspepsia	Anæmia, disorder of digest. organs, spinal irritat.
76	A. A.	23	Amenorrhœa	Weakness, gen. deprsn. disorder of digest. organs	Anæmia, marked disorder of digestive organs
77	J. C.	29	Profuse leucorrhœa, dysmenor.	Excessive fatigue, depression, and dyspepsia	Anæmia, disorder of digestive organs
78	E. H.	26	Hysteralgia, irreg. menstrua., profuse leucor.	Bad general health	Anæmia, asthenia, disorder of digestive organs
79	M.A.H	37	Hysteralgia, fibrous enlargement of cervix	Mental anxiety, weakness, and depression	Anæmia, dyspepsia, spinal irritation
80	C. G.	27	Irreg. & painful menstruation, leucorrhœa	Very bad health, weakness, and gastric disorder	Anæmia, derangement of digestive organs very marked
81	S. H.		Scanty & painful menstrua., profuse leucorrhœa	Scrofulous disease, general prostration	Anæmia, gastrodynia, and dyspepsia
82	E. H.	17	Amenorrhœa	Weak, nervous, and generally out of health	Anæmia, disorder of digestive organs

No.	Name.	Age	Uterine Disorder.	Antecedents.	Concomitants.
83	E. A.	31	Irregular menstruation, hysteralgia, leucorrhœa	Over fatigue, mental agitation, dyspepsia	Derangement of the digestive organs
84	L. C.	43	Hysteralgia, dysmenorrhœa	Mental anxiety, hysteria, dyspepsia, weakness	Anæmia, hysteria, dyspepsia, spinal irritation
85	S. D.	27	Leucorrhœa	Bad health, weakness, and dyspepsia	Anæmia, disorder of the digestive organs
86	M.A.H	26	Scanty & painful menstruation	Bad health	Anæmia, marked dyspepsia
87	S. S.	35	Irreg. & painful menstruation, leucorrhœa	Bad health, weakness, and nervous symptoms	Anæmia, disorder of digestive organs, nervous symptoms
88	M. G.	37	Hysteralgia, dysmenorrhœa, leucorrhœa	Weakness, depression, and gastric disorder	Anæmia, and derangement of digestive organs
89	M.A. B	34	Hysteralgia, leucorrhœa	Severe labour, preceded by bad health and gastric disorder	Asthenia, general disorder of digestive organs
90	M.A. B	34	Profuse and persistent menorrhagia, recurring frequently for years, fibrous enlargement of the neck and body of the uterus	Long continued derangement of the stomach and digestive organs; severe flooding after labour	Anæmia, considerable disorder of the stomach and digestive organs, nervous symptoms
91	J. K.	18	Irregular, scanty, and painful menstruation	Bad health, and derangement of digestive organs	Anæmia, nervous symptoms, and great disorder of digestive organs.
92	E. W.	25	Dysmenorrhœa, profuse leucorrhœa	Bad health, depression, dyspepsia	Anæmia, nervous symptoms, and disorder of digestive organs
93	A. E.	23	Dysmenorrhœa,	Bad health, dyspepsia	Anæmia, dyspept. symptoms, spinal irritation
94	M.S.R.	40	Metrorrhagia, fibrous enlargm. of neck and body of the uterus	Mental anxiety, weakness and depression, long continued disorder of digestive organs	Anæmia, great derangement of the stomach and digestive organs
95	E. J.	30	Irregular and often excessive menstruation, leucorrhœa	Much mental uneasiness, impaired general health, dyspeptic symptoms	Anæmia, depression, disorder of digestive organs
96	J. J.	24	Dysmenorrhœa, leucorrhœa	Weakness and bad health, dyspepsia	Anæmia, dyspepsia
97	J. I.	26	Hysteralgia, dysmenorrhœa, leucorrhœa	Bad health and debility, depression, dyspepsia, & nervous symptoms	Anæmia, dyspepsia, and nervous symptoms
98	M. O.	26	Irregular and very scanty menstruation	Mental uneasiness, occasioned by leaving home, weakness and nervous symptoms, dyspepsia	Intense anæmia, marked disorder of the stomach and digestive organs
99	M.F.S.	19	Metrorrhagia, leucorrhœa	Weakness, nervous symptoms, dyspepsia	Anæmia, very marked derangemt. of digest. org.
100	M.E.B	27	Menorrhagia and severe leucorrhœa	Previous miscarriage, long continued derangement of digestive organs	Anæmia, and very severe derangement of digestive organs

On analysing this table, it will be found to comprehend thirty-seven cases in which the uterus was morbidly irritable; fifty-two cases of disordered menstruation; sixty-five of leucorrhœa; and seven of organic disease. These affections were variously blended in different cases; and, upon the whole, it may be said to be rare for any uterine disorder to be met with in a perfectly isolated form. Irritable affections, for instance, are generally associated with either menstrual or leucorrhœal disorders. Menstrual disorders seldom occur without leucorrhœal discharges, or some other kind of uterine derangement; whilst leucorrhœa is so frequent a concomitant of all morbid conditions of the uterine organs, whether functional or organic, that it can scarcely be regarded in the light of an idiopathic disease. With regard again to antecedents, the table points to the fact, that in nearly all the cases some derangement of the general health preceded the uterine disorder. The occurrence of languor, weakness, and depression, would show that there had been antecedent disturbance of the nervous system. The digestive organs must have been disordered in the majority of these cases, whilst the symptoms referable to the nervous and muscular systems would tend to show that there was probably some abnormal condition of the circulating fluid. In looking to the concomitant affections, again we observe that a disordered condition of the chylopoietic organs is very frequently, if not invariably, met with; that anæmia presents itself concurrently with uterine derangement in a large proportion of such cases, amounting to nine-tenths of those which are contained in the table. Spinal irritation was met with in thirty-six cases out of the hundred, and would appear to have important relations to uterine disease. The general inference, then, deducible from these facts, is, that uterine disorder is for the most part preceded by constitutional derangement, and that this is more especially referable to the nervous system, the digestive organs, and the blood; and that various morbid conditions in respect of these present themselves, either as complications or concomitants of most uterine affections.

But let it be understood, that however uterine disorder has arisen, it may continue long after the exciting causes shall have passed away; may assume the character and importance of an idiopathic affection; and, as such, be the cause of various secondary disorders. A healthy female, for instance, receives a severe fright during menstruation, which is immediately followed by suppression, and this may continue for some time, even for months: here the disturbing cause was evidently mental, momentary, and transient,—not so the effect; and this, so long as it continues, may be a source of embarrassment to the constitution, and the immediate cause of secondary disease of other organs, which again, by reacting upon the uterus, would tend to perpetuate or maintain a state of irritation which is unfavourable to the return of healthy functional action. But in other cases, uterine derangement originates in causes of a more permanent nature, as in the instance of disorder of the chylopoietic organs; which, whilst on the one hand a prolific cause of it, is on the other, often a persistent malady,—often continuing for years, and that, too, in despite of every available mode of treatment. Now, should the uterine organs fall into a state of irritation or disorder, as a consequence of this, it must follow that such irritation or disorder will be equally protracted and difficult of cure:—nay more,

vascular disease will sooner or later supervene upon such irritative disorder, and thus increase the difficulties of the case, independently of its being aggravated and perpetuated by the continuance of its original cause. These circumstances show the necessity of regarding uterine diseases in a comprehensive manner; but they do not militate against the correctness of the views which I have ventured to express, and which I shall now proceed to illustrate.

The Origin of Uterine Disease from Disturbed States of the Nervous System must be generally admitted, and every practitioner must be cognisant of cases in which it has arisen from such causes. Severe mental emotion, shock, or affliction, will, it is well known, give rise to painful uterine affections, to interrupted, excessive, or irregular menstruation, miscarriage, or premature labour; and if such consequences follow such causes, it is reasonable to conclude that causes of a similar but less violent nature will equally give rise to slighter but no less certain deviations from normal uterine action. This, indeed, is in reality the case, and many instances of uterine disease may be traced to the continued influence of grief, anxiety, and other uneasy states of mind. But the nervous system may be disturbed in many other ways, by various pursuits, by residence in an unhealthy situation, by insufficiency of food, over fatigue, and other physical causes, which tend to depress the constitution and lower the tone of the nervous system. And here also the uterine organs may suffer; for in whatever way nervous influence is withheld, whether from defective or irregular supply, such parts being inadequately supplied with nervous energy, will either take on irregular actions, or become morbidly susceptible to disturbing influences.

The recent researches of Dr. Robert Lee, in regard to the nerves and ganglia of the uterus, are of extreme interest in a practical point of view, as tending not only to show how great is the amount of nervous energy possessed by that organ, but as serving to explain the cause of that intimate sympathy which exists between it and other organs of the body, a circumstance upon which so much of its physiological as well as pathological conditions depend. It would not be inconsistent with the views of modern physiologists to attribute to those ganglia and nerves important bearings upon the subject of uterine pathology, regarding them as we must as nervous centres, which, under the influence of certain stimuli, give rise to corresponding actions, either conducive to health or disease, according to the character of the impressions which are received. In speaking of the nervous ganglia generally, a recent writer observes, "that they are nervous centres, which probably receive through afferent fibres impressions of which we are unconscious, and reflect these impressional stimuli upon afferent motor fibres; that perhaps motorial stimuli emanate from them; the movements excited by, or through the ganglia, being always involuntary, and affecting chiefly the muscular parts of the viscera, the sanguiferous, and perhaps absorbent vessels, and that in fine, the chief purpose served by the ganglia and ganglionic nerve fibres, is to govern the involuntary, and, for the most part, imperceptible movements of nutrition, so far at least as these movements are not dependent upon the brain and spinal cord."[1]

[1] Quain's Anatomy; Edited by Dr. Sharpey and Mr. Quain, p. ccxxiii.

Consistently with these views, then, it may be assumed, that so long as the uterine ganglia receive, through afferent fibres, impressions of a normal character, so long will normal ganglionic actions ensue, giving rise to healthy uterine action, both in regard to function and structure; whilst on the other hand, impressions of an abnormal character will excite ganglionic actions equally subversive of both. The *modus operandi*, then, of disturbed states of the nervous system, irritative conditions of the nervous centres, and disorders of remote organs, in the causation of uterine disease, is either by the uterine ganglia participating in such states of disorder, or receiving impressions which tend to morbid actions. Regarded, then, in this point of view, we cannot be surprised that the majority of causes which tend to uterine disturbance should have a constitutional rather than a local origin; for whatever impressions are made upon the body, whether through the mind or otherwise, which are capable of being reflected upon the uterine ganglia, and are calculated to excite morbid actions, are so many ways in which uterine disorder or disease may be induced. Examples of this occur in all uneasy states of mind, in irritative disorder of organs with which the uterus has sympathetic relations, and in abnormal conditions of the blood; and if it is the case that uterine disturbance most frequently arises from such causes, it cannot be expected that it should cease, so long as the conditions upon which it depends continue.

In connexion with the nervous system, there is no subject of greater interest or importance than the influence of the mind, or rather of certain uneasy or emotional states of mind, in giving rise to uterine derangements; and there is none which it is more necessary to study and appreciate fully in all its bearings. In regard to pregnant women, the effect of sudden or severe emotion has been often of a very serious nature; such as the death of the *fœtus in utero*, many alarming sensations, and abortion, miscarriage, or premature labour, according to the period of pregnancy. Should the child's life be spared, it has been born deformed, idiotic, maimed, or disfigured, whilst parturition itself has been seriously compromised. These circumstances are, however, well known to the profession, and need not be illustrated by any particular instances. But the effect of severe mental emotion upon the non-pregnant female is often equally serious, although less frequently observed; and there is scarcely a functional disorder of the uterus which may not, and has not been, occasioned by it. Thus Baudelocque reports that sixty-two women were attacked with uterine hæmorrhage, or suppressions, upon the occasion of the explosion of the powder magazine of Grenelle. M. Husson gives the case of a woman who, at several different times, was attacked with menstrual suppressions under the influence of claps of thunder. M. Colombat observed, in July 1830, that the reports arising from the platoon firing and cannon shot produced the same effect in several women. He also states, that a relation, whose menstruation was ordinarily very regular and abundant, was attacked with a sudden suppression, in consequence of a frightful dream, a kind of nightmare. With regard to menorrhagia, again, it is well known, that all circumstances capable of imparting a sudden shock to the ennervation, such as joy, grief, anger, fright, have been its causes: and M. Alibert relates the case of a female who,

whenever she gave way to transports of passion, was attacked with violent hæmorrhage from the uterus (see Meigs *on the Diseases of Females*). I have myself reported cases in which hysteralgia arose from sudden fright.

But the influence of less violent perturbations of mind, of anxiety, grief, affliction, etc., although productive of less marked results, are equally the cause of many uterine maladies; and although such states of mind in themselves do not admit of a direct cure by medicine, it is yet possible to do much by studying the nature, order, and sequence of the morbid actions to which they give rise. In some cases of this kind, the uterine organs would appear to receive a direct impression from the brain of a disturbing character, and uterine derangement to follow, without the intervention of any other organ or agency; and this is especially the case in the instance of sudden shock or emotion. But in other instances, and more particularly where the mental affection has been of a less violent nature, it would seem that other organs were disturbed, either concurrently with the uterus, or altogether independently; and the consequences differ accordingly. In the first of these cases, it will generally happen, that the uterine disorder, and that concurrently produced, will reciprocally react upon one another; and this reciprocal reaction, while it gives increased intensity and persistency to each, will at the same time disturb the constitution in a proportionate degree. In the second case, where the mental uneasiness, etc., is principally or entirely reflected upon some organ, it will often happen that the disorder thus produced will become the immediate cause of uterine derangement, either by a sympathetic or reflected operation; and in this respect it has appeared to me, from many facts which have come under my observation, that the spinal cord, or rather its ganglia, have important relations to uterine pathology. Spinal irritation is, as I believe, a frequent consequence of mental uneasiness, shock, or emotion, and at the same time, when so produced, a frequent cause of uterine disturbance; and it is to spinal irritation thus induced and productive of uterine disorder that I would more particularly wish to draw attention, as exemplifying in one form the relations which exist between uterine and constitutional disorder.

The existence of spinal irritation as a distinct and idiopathic affection, whether dependent upon mental or other causes, has been altogether denied by some writers, while it has been doubted by others. In speaking of it, Dr. Abercrombie remarks, that "it may be doubted whether it conveys any definite notion, or whether it is not to be considered as a gratuitous principle assumed so as to answer to the phenomena, rather than deduced from observation". But, with all the deference and respect due to so high an authority, it must be added, that the truth of the doctrine has been affirmed by many eminent practitioners, and so many facts have been accumulated in support of it, that it is impossible to doubt its reality, however difficult it may be of explanation. I shall, in the first place, state the grounds upon which I consider it entitled to be ranked as a distinct affection, and then those which point to its connexion with mental causes on the one hand, and uterine derangement on the other.

The subject of spinal irritation was first noticed by Mr. Pleyer, of

Malmesbury, in the twelfth volume of the *Quarterly Journal of Science;* and his attention would appear to have been first directed to it, from observing that the symptoms of spinal disease frequently resemble various and dissimilar maladies, and that commonly the function of every organ is impaired whose nerves originate near the seat of disorder. The occurrence of pain in distant parts particularly attracted his attention, and induced frequent examinations of the spinal cord, and the results of his investigations is given in the following words: "After some years' attention, I consider myself enabled to state, that in a great number of diseases, morbid symptoms may be discovered about the origins of the nerves which proceed to the affected parts, or of those spinal branches which unite with them; and that if the spine be examined, more or less pain will commonly be felt by the patient on the application of pressure about or between those vertebræ from which such nerves emerge. If disease is confined to one side of the body, or one arm, or one leg, this tenderness will be felt on the *same side* of the spine *only;* but if central parts, or *both sides* of the body, or both arms or legs, are diseased, tenderness will be felt on *both sides* of the spine. This symptom has been found to attend various other affections. This spinal affection may, perhaps, be considered as the *consequence* of diseases, but of its existence at their *commencement* any person may satisfy himself; and this circumstance, combined with the success which has attended the employment of topical applications to the tender parts about the vertebræ, appear to indicate that the *cause may* exist there."

The correctness of these observations has been attested by many subsequent writers, and more particularly by Dr. Brown, Dr. Darwall, Mr. Teale, and the Messrs. Griffin, the latter of whom have given us the result of their investigations upon the subject in a work on the functional affections of the spinal cord and ganglionic system of nerves, which contains the most complete and elaborate account of the phenomena resulting from spinal irritation that has yet been published. More recently the matter has been treated of by Dr. Todd, in an article in the *Cyclopædia of Practical Medicine,* and he has endeavoured to show that anatomy affords some support to the doctrine. He particularly insists that it is unfair to deny the previous existence of compression, or irritation of the spinal cord, or of the spinal nerves at their origins, because the anatomist cannot detect any vestige of disease after death; he points out that the spinal cord and the nerves which emerge from it, are surrounded by a venous anastomosis of remarkable complexity, that these veins do not possess valves, that they communicate freely with the superficial veins and with the numerous muscular veins in the region of the back; and from these anatomical considerations he infers, that such a degree of congestion or turgescence of this spinal venous plexus may easily occur as will excite irritation at the origins of the spinal nerves, and that such congestion may exist *ante mortem* without leaving any trace of it *post mortem.* These facts certainly meet many of the objections which present themselves to the reception of spinal irritation as a distinct pathological affection. For, if spinal congestion is so ready a consequence of irritation of the cord, the phenomena it presents, and its mode of causation, do not essentially differ from the usual consequences of irritative

disorder of other organs. The doctrine of venous congestion, as explanatory of the phenomena of spinal irritation, accords well with many pathological facts which have been observed in connexion with it. Thus it is most frequently met with in persons who are weak and anæmiated, in those whose general health has been impaired, and thus in those in whom the circulation must be languid and favourable to the occurrence of venous congestion. It is at the same time most successfully treated by measures which improve the health, the tone of the nervous system, and the vigour of the circulation.

But, notwithstanding these circumstances, there are many who deny the existence of spinal irritation as a distinct pathological affection, and regard it, when present, rather as an accident or a casualty than as an independent lesion; and it must be admitted that it is difficult to establish the affirmative of this question; first, because the exact nature of spinal irritation has not, as yet, been satisfactorily determined; and secondly, because *post-mortem* examinations have not hitherto thrown any light upon it. But these objections do not appear to me to be by any means fatal to the doctrine; for there are many diseases, and more especially of the nervous system, the reality of which cannot be doubted, the nature of which is yet obscure, and in regard to which *post-mortem* investigations have elucidated nothing. Let us look, for instance, to tetanus, hydrophobia, and some forms of epilepsy. This spinal affection, moreover, is admitted to be functional, to be one which does not lead to fatal consequences, and therefore one the nature of which cannot be determined by *post-mortem* inquiries. But admitting these difficulties, it may be replied, that the history of these cases, their symptoms, and more particularly the effect of remedies, point conclusively to the reality of spinal irritation as a distinct pathological condition. A female, perhaps in delicate health, receives a sudden fright or shock, which is followed, either immediately or remotely, by uterine symptoms. The spinal column is examined, and tenderness found in the lumbar or sacral region: possibly no other organic lesion is discoverable: and in this case the application of a sinapism or of some other counter-irritant to the tender portion of the spine is followed by a cessation of the uterine symptoms, without any other kind of treatment. Here it must be obvious, that some state of the spinal cord existed, upon which the uterine malady depended, unless, indeed, such an occurrence were rare and accidental. But that it is not so, is proved by the frequency with which such cases are met with; and of which I subjoin the following as examples.

Case. Mary Ann Davies, aged 20, a healthy young woman, rather more than eight months advanced in pregnancy, received a sudden fright, on the 18th September; labour pains came on shortly afterwards, and, at half-past two the next morning, she was safely delivered of a living child. She went on very well after her labour for the first twenty-four hours, but afterwards became feverish, her digestive organs disordered, and she was seized with severe pain in the uterus, which had continued for many hours persistently before I saw her. On examining the spine, there was well-marked tenderness in the lumbar and sacral region. A sinapism was directed to be applied to this part, and the uterine pain disappeared shortly afterwards. The only medicine given was an alterative dose of blue pill.

Case. Ann Keane, aged 20, had nearly reached her full period of pregnancy, when she was frightened: no particular symptoms occurred for some days, but on the eighth day uterine hæmorrhage took place; this was not found on examination to be connected with placental presentation, nor had the labour apparently commenced. After continuing for six hours rather profusely, it ceased; and twenty-four hours afterwards labour came on, and she was in about eight hours safely delivered of a healthy child without any particular loss of blood. Some hours after this, she complained of much uterine uneasiness, and on examining the spine, it was found very tender in the sacral region. The uterine pain disappeared on applying a sinapism, and there appeared to be no other cause for it or the hæmorrhage than the irritable state of the spine.

Case. Harriet Benjou, aged 19, applied at the Paddington Free Dispensary, suffering from amenorrhœa and leucorrhœa; the former was brought on by a fright, and since the suppression she had suffered from headache and nervous symptoms, with much derangement of the stomach and digestive organs. On examining the spine, there was decided tenderness in the lumbar and sacral regions; tartar emetic ointment was directed to be rubbed over the tender part, and, after four or five applications, a good deal of cutaneous irritation was produced, which was immediately followed by cessation of the leucorrhœa.

Mr. Teale, in his treatise on neuralgic diseases, gives several cases of an analogous though more general character, of which the following may be quoted.

Case. Mr. L., aged 26, complained of a feeling of indisposition, having suffered for a few days from stiffness in the neck and pain at the back of the head, extending laterally to the ears and upwards over the back part of the scalp; he perspired much at night; felt languid and unable to attend to business; about four weeks before, he was exposed to wet and cold, and had ever since been affected with these symptoms. On pressing the spine, there was tenderness over the first cervical vertebra, but no pain was produced by firm pressure upon any other part of the spine. Leeches were applied to the neck; and it was stated that the pains in the scalp were immediately relieved on their application.

Case. In another case, a lady, a week after her confinement, complained of pain in the head, occurring in the afternoons in a violent degree. It was described as a dull aching pain, principally seated in the occipital region, but extending from that part over the parietal bones; towards the temples, and in the neighbourhood of each ear, there was a small space more acutely painful than the rest. There were also pains darting over the scalp and along the upper part of the neck. She complained of violent pulsating sensations in the head, accompanied with distressing sounds, which she compared to the beating of hammers. Leeches had been applied to the temples, but without benefit; the spine was examined, and it was found extremely tender over the two upper cervical vertebræ. Leeches were applied to this spot, and it is reported that they gave immediate relief, and that no further return of the paroxysms was experienced.

Such cases as these are sufficiently simple, and for the most part require only that proper measures should be directed to the spine to

effect a cure. But it more frequently happens that spinal irritation is met with in conjunction with disorder of some other organ, which equally tends to keep up uterine derangement, and thus equally requires to be looked for and corrected. In this respect, derangement of the digestive system is a very frequent concomitant, and would appear to have a similarity of origin in many instances. In this case, if the concomitant affection is not duly attended to, any measures directed to the spine will fail of their anticipated benefit. The following cases illustrate this connexion and the results of treatment.

Case. Elizabeth Brown, aged 31, when about four months advanced in pregnancy, received a severe fright, which occasioned her almost to faint away. From the date of this occurrence, she began to feel many uneasy feelings in the stomach and womb, such as she had never had before in any of her six previous pregnancies. At times her sensation was that of extreme distension of the abdomen, as if it would burst; at other times she felt severe uterine pains, with occasional forcing sensations extending to the hips, back, and thighs. The digestive organs were much disordered, the tongue was unpleasant on awaking of a morning, the appetite was uncertain, and the bowels were sometimes costive, and at other times relaxed. On examining the spine, there was well-marked tenderness over the sacral region; indeed, pressure here brought on pain in the uterus. She was directed to apply sinapisms daily to the region of the sacrum, and mild alteratives with aperients were prescribed. In little more than a week her uneasy feelings had all subsided, and there was every probability of her going on favourably with her pregnancy.

Case. Margaret Nadauld was attended, October 1, 1850, suffering intense pain in the uterus and left iliac region. The pain was of a very excruciating character, was increased by the least pressure over the uterus externally, and the slightest touch of the cervix was attended with great suffering. There was a great deal of febrile disturbance, a quick pulse, hot skin, furred tongue, thirst, and disordered bowels. The lower part of the spine was extremely tender, and on pinching up the skin of the left iliac region, the patient evinced much suffering. The history of the case showed that it had originated in a fright, which the patient had had a few days before. She was directed to have a linseed-meal poultice applied over the hypogastrium, and a sinapism to the lower part of the spine. One grain of calomel, and five of Dover's powder, were to be taken every four hours, until three doses had been taken, and on the following morning as much castor oil as would insure a full action of the bowels. The next day, the symptoms were all abated; and, so far as the immediate attack was concerned, the patient considered herself to be convalescent.

Case. Emma Portsmouth, aged 28, unmarried, applied at the Paddington Free Dispensary under the following circumstances. She had been suffering from profuse and almost constant menorrhagia for a period of eight months, during which period, she had been scarcely a week free from some kind of sanguineous discharge from the uterus, and had very often passed clots of blood. At times she had severe uterine pain, and a sensation of bearing down with leucorrhœa, and much pain in the back. These symptoms had been preceded by general weakness and ill health, and much disorder of the stomach and digestive organs. She had also undergone a great deal of anxiety and trouble, to

which she attributed her bad health and uterine maladies. When admitted, she was suffering from the consequences of anæmia in a severe form, very marked dyspeptic symptoms, and the lower part of the spine was exquisitely tender; there was almost constant metrorrhagia and leucorrhœa when this was absent. In the first instance, the treatment adopted was the exhibition of the acidulated muriated tincture of iron, with drachm doses of the solution of the bichloride of mercury; but as in a week she was not materially better, and as the tenderness of the spine was very marked, she was directed to rub the lower part of it freely with the tartar emetic ointment night and morning, until pustulation took place. In a week from this period she is reported to be much better, and I find the following entry: "Is much better, looking better, hæmorrhage less, tongue cleaner, appetite improved, leucorrhœa less, feels stronger." Three days afterwards the following entry was made: "Is much better; no hæmorrhage, leucorrhœa less, no uterine pain, reports that she has very much improved since pustulation has taken place over the spine." This patient entirely recovered under this mode of treatment, but it is unnecessary to give the particulars of the case any further.

Case. Mary Johnstone was attended in November, 1850, suffering from much uterine pain, profuse leucorrhœa, and irregular menstruation. She had been out of health before any uterine symptoms had appeared. She had undergone much anxiety and trouble, the tongue was habitually dry and unpleasant, and she felt low, nervous, and depressed. She had been married two years, but had no children; there was extreme tenderness of the spine in the lumbar region, she was anæmiated, and her digestive organs were much disordered. The tartar emetic ointment was directed to be rubbed over the lower part of the spine night and morning, until pustulation took place, and she was ordered the acidulated muriated tincture of iron, with drachm doses of the solution of the bichloride of mercury three times a day. After pursuing this treatment for four weeks, she is reported to be perfectly well; to have no uterine pain or leucorrhœa, the tongue perfectly clean, and the digestive organs healthy. She especially mentioned, that the uterine pain and leucorrhœa ceased upon pustulation taking place over the tender part of the spine.

These cases appear to me to be sufficient to establish the truth of the doctrine for which I am contending; viz., that spinal irritation exists as an independent affection, and, as such, may be the cause of various secondary uterine disorders. In the first group of cases, we see it connected with symptoms which entirely disappear without any specific treatment, simply by attending to the morbid condition of the spinal cord. In the second, we find it coexisting with chylopoietic disorders, and together with these the cause of various uterine maladies, which again disappear without special treatment, on correcting the spinal affection concurrently with the derangement of the chylopoietic viscera. But it may be supposed that I have attached too much importance to the spinal affection in this latter group, and too little to the gastrointestinal as a cause of uterine disorder; and with the view of meeting this remark, I subjoin two cases, in which every treatment that appeared to be indicated was adopted, and failed, until the spinal affection had been recognised and remedied.

Case. Mrs. R. B., a lady of extremely nervous temperament, was

attended by me in her second confinement on Dec. 12, 1841. The labour was comparatively easy, and over in a few hours: no unfavourable circumstance occurred either during or subsequently to it, and, up to the 18th December, her progress was as satisfactory as could be wished. She began then to suffer from nervous symptoms, her sleep was broken, her tongue and digestive organs were disturbed, and slight febrile symptoms showed themselves. She had also pain and uneasiness in the uterine and left iliac regions; not at first persistent, but rather recurring at intervals: pressure over these parts gave increased pain. Dr. Ferguson, who was consulted on account of these symptoms, attributed them to a mild attack of puerperal fever, observing that he considered that there was congestion of the left ovarian ligament. Eight leeches were applied to this part, and subsequently warm linseed poultices. At the same time, small doses of grey powder and Dover's powder were given at intervals of four or six hours. The local pain and uneasiness were relieved by these measures, and, upon the whole, the case appeared to be going on favourably: but after some days had elapsed, there was still a greater degree of irritability of the constitution observed than is usual, the pulse continued quick, and the digestive organs were still somewhat disordered. Part of these symptoms were attributed to her extremely nervous temperament, and we had every expectation of their subsiding; but instead of this, a week after the treatment had been commenced, we were surprised by a sudden return of all the uterine symptoms, in a severe form; with them the pulse rose, and there was much constitutional disturbance. The abdominal pain was very acute, and aggravated by the least pressure. The sudden return of these symptoms suggested a doubt as to their inflammatory nature, and this was strengthened by the result of my inquiries. It appeared that some weeks before her labour, she had lost a near relative, whose death affected her very painfully; from that time she became subject to uneasy feelings in the left side of the abdomen, and the return of the uterine symptoms appeared to have been immediately caused by her seeing the monthly nurse fall while carrying her infant. The spinal column was examined, and there was extreme tenderness at the commencement of the lumbar vertebræ, and this was so intense that she completely started under the pressure of the finger. These circumstances were reported to Dr. Ferguson, who approved of topical counter-irritation over the tender part of the spine. Nothing but a sinapism was employed, but it succeeded in removing all her symptoms. The uterine pain subsided, as did also the constitutional disturbance, and she rapidly got well. She has since been twice confined, and on each occasion has done well.

Case. Elizabeth Loughborough, aged 25, applied August 6th, 1850, suffering from anæmia and dyspeptic symptoms, together with leucorrhœa; she had acute pain at the epigastrium; the tongue was dry and furred, and her appetite was bad; she had also pain at the back of the head, and felt giddy and faint; she menstruated regularly, but with pain, and she suffered much from leucorrhœa. Her illness had been preceded by mental agitation, and to this she attributed it. For these symptoms she was, in the first place, treated with alterative doses of blue pill, at bed-time; with the citrate of iron, and sesquicarbonate of ammonia, during the day. At the end of a fortnight, she

was not materially better, and still complained of severe pain at the epigastrium. The chlorate and nitrate of potass were now added to her mixture, and they were directed to be taken in effervescence with the citrate of iron. At the end of another week, she was still complaining of the epigastric pain; her digestive organs continued in a very irritable state, and upon the whole she was very little better. An examination was now made of the spine, and exactly corresponding horizontally with the pain at the epigastrium, it was found to be very tender upon pressure. The tartar emetic ointment was ordered to be rubbed over this portion of it, night and morning, until pustulation took place; no change was made in her medicines, and four days subsequently she reported herself to be very much better. The pain at the epigastrium was nearly gone, she felt generally stronger, and the leucorrhœa has almost ceased. From this time she rapidly improved, and was soon convalescent.

It appears to me impossible to reconcile the facts of these cases in any other way than by admitting the doctrine of spinal irritation as a distinct and independent affection; and although post-mortem investigations are wanting to inform us of the precise nature of the affection, the existence of some morbid condition of the cord or its ganglia, in such cases, is conclusively shown by the results of treatment. Nor is this doctrine by any means irreconcilable with well-established physiological facts: it is now, I believe, generally admitted, that the spinal cord is to be regarded rather as a series of nervous centres than a single organ; that from these centres emanate the nervous actions of corresponding parts of the body; and that one or more of these ganglia may be disturbed irrespectively of others. Now in this latter case it will follow, that the disorder of any given portion of the medulla will be principally evinced by disorder in those organs or parts which are supplied with nerves from the particular parts or ganglia which are affected; for as a general rule, it is found that disease of the nervous centres is less indicated by morbid phenomena in the immediate seat of the disease than in those organs or parts to which the nerves arising from them are distributed. This is certainly so in regard to structural diseases of the spinal cord and brain; and in cases where the trunks of nerves have been compressed or disorganised, the effects are less shown at the immediate seat of these lesions, than in those parts to which these filaments are distributed. In the more severe forms of disease, this principle, as observed by Mr. Teale, is readily admitted and recognised; and when, for instance, one half of the body shall have lost its sensibility, and the corresponding muscles their power of action, we look at once to the brain as the immediate seat of the disease. But in the slighter forms of disease of the brain and spinal cord, such as do not obliterate, but merely impair or pervert the functions of the nerves, this important principle, which is as strictly applicable here as in the former case, is too often entirely overlooked; and a numerous class of complaints are regarded as local affections, instead of being considered as actual diseases of that portion of the brain or spinal cord from which the nerves of the part are derived. I might support the correctness of these views by adducing numerous cases which would show how efficacious had been the effect of remedies directed to the spine, where treatment perseveringly ad-

dressed to the seat of pain or uneasiness had been altogether useless. But this would carry me beyond the scope and limits of this paper.

In the next place, I have to consider how far spinal irritation is a consequence of mental uneasiness on the one hand, and the cause of uterine disorder on the other. On looking to the foregoing table, I find that thirty-six cases are referred to in it, in which uterine disease had been preceded by, and was apparently connected with mental causes; and of these it was found that spinal irritation existed in seventeen, in a decided manner; whilst in five only was it met with independently of such causes. It should be added, however, that it may have existed in a larger proportion than this. But as the majority of patients were not so ill as to be confined to bed, the examination of the spine was generally made over their dress, and the result was consequently less accurate than could have been desired. To elucidate the point further, I have made the following analysis of twenty-six cases of spinal irritation, which occurred in connection with uterine disorder, giving their probable causes, and the nature of the concomitant affection.

Spinal Irritation.

Case.	Antecedents.	Concomitant Uterine Malady.
1	Bad health, dyspepsia.	Dysmenorrhœa.
2	Anxiety, hysteria, dyspepsia, and weakness.	Hysteralgia, dysmenorrhœa.
3	Anxiety, asthenia.	Hysteralgia, fibrous tumours.
4	Anxiety, hæmorrhage post partum, great debility.	Hysteralgia, dysmenorrhœa, profuse leucorrhœa.
5	Anxiety, dyspepsia, bad health.	Hysteralgia, dysmenorrhœa.
6	Anxiety, bad health.	Hysteralgia, leucorrhœa.
7	Fright, general weakness.	Acute hysteralgia.
8	Mental emotion, delicate health, pregnancy.	Uterine and ovarian disease, simulating puerperal fever.
9	Mental uneasiness, dyspepsia, bad health.	Hysteralgia, dysmenorrhœa.
10	Anxiety, dyspepsia, bad health.	Menorrhagia, leucorrhœa.
11	Anxiety, bad health, extreme weakness.	Amenorrhœa.
12	Weakness, depression, and general ill health.	Hysteralgia, leucorrhœa.
13	Anxiety and trouble, bad health, weakness, depression, dyspepsia.	Hysteralgia, dysmenorrhœa, leucorrhœa.
14	Mental uneasiness, dyspepsia.	Hysteralgia.
15	Anxiety, dyspep., 5 difficult labours.	Hysteralgia, dysmenorr., leucorr.
16	Anxiety, bad health, dyspepsia.	Hysteralgia, menorrhagia, leucorr.
17	Bad health, weakness, dyspepsia.	Hysteralgia, menorrhagia, leucorr.
18	Weakness, depression, anxiety, and over fatigue.	Hysteralgia, leucorrhœa.
19	Dyspepsia, intestinal derangement.	Hysteralgia, leucorrhœa.
20	Bad general health, weakness.	Dysmenorrhœa, leucorrhœa.
21	Great mental anxiety, dyspepsia.	Carcinoma, metrorrhagia.
22	Mental anxiety, dyspepsia.	Hysteralgia.
23	Fright.	Hysteralgia, leucorr., dysmenorr.
24	Over fatigue, want of sleep, extreme debility, nervous symptoms.	Amenorrhœa.
25	General bad health, dyspepsia, fright.	Hysteralgia, leucorrhœa, irregular menstruation.
26	Mental trouble, excitement, dyspep.	Leucorr., irregular menstruation.

From this table it would appear, that of the twenty-six cases, twenty had been preceded by mental uneasiness, shock, fright, or agitation of some kind. This is a large proportion, but not larger than, I believe, really obtains in the instance of well marked cases of spinal irritation; and the conviction that such causes lead to this affection is so strong on my mind, that I would suggest a careful examination of the spine in all cases where they have preceded uterine symptoms. That such states of mind should affect the medulla spinalis in the manner supposed, is rendered at least probable by what occurs in other cases. As the result of violent or sudden emotion, we know that the functions of the cord throughout may be disturbed; as is shown in the case of chorea, a disease especially of the spinal system, and of which the most frequent exciting cause is sudden fright. Some cases of epilepsy may also be referred to in support of this view; and if it is the fact that violent or sudden mental impressions should give rise to general disturbance of the spinal cord, it appears to me reasonable to conclude that less vivid impressions, such as various uneasy states of mind, should also affect it and give rise to irritation of a more subdued but more persistent character. The influence of such mental causes in tending to the production of functional disorders of the spinal cord, is further rendered probable by other considerations. Thus this affection is for the most part met with in weak, anæmiated, and delicate persons. Dr. Taylor, of Huddersfield, who has paid great attention to it, informs me, that it is his opinion that spinal irritation may arise from any cause which reduces the general strength, and that nothing more than this is necessary for its production. Regarded then in this point of view, mental uneasiness or anxiety would be quite adequate to account for it, by its depressing influence upon the constitution and the general health. Again, it has been conjectured by some who have investigated the subject, that the phenomena immediately depend upon congestion of the spinal venous plexus; a circumstance which would also be favoured by the causes in question, nothing being more calculated to depress the tone of the nervous system, or the vigour of the circulation, and thus to give rise to venous congestion, than continued anxiety or uneasiness of mind.

But, in the last place, the question occurs; If it be admitted that the causes in question can so affect the spinal cord as to give rise to functional disorder of it, can such disorder give rise to uterine derangement, as I have supposed and represented? To this question, I have no hesitation in giving an answer in the affirmative. The cases I have related point in their history to this conclusion, analogy is alike in favour of it, and it is impossible to reconcile the results of treatment with any other view. Nor do I think that any one who has carefully investigated the subject can arrive at any other conclusion. It is quite true, that we cannot always determine whether the uterine or the spinal affection has the priority, because we have not often the opportunity of investigating this point at a sufficiently early period of the case; but some who have had this opportunity, affirm that spinal irritation exists at least from the commencement of such cases. Thus Mr. Player remarks (*Quarterly Journal of Science*, vol. xii, p. 429):— "This spinal affection may perhaps be considered as the *consequence*

of diseases; but of its existence at their commencement any person may satisfy himself, and this circumstance, combined with the success which has attended the employment of topical applications to the tender parts about the vertebræ, appears to indicate that the *cause* of such diseases may exist there."

Very similar views have been expressed by other writers upon this subject. In treating of it in a paper published in the *Midland Medical and Surgical Reporter*, for May 1829, Dr. Darwall enumerates many of the symptoms with which spinal irritation is attended, and observes, that the most common disturbance met with in connexion with it is in the uterine functions,—that he had scarcely seen an instance of it in which this had not occurred. Most commonly, he says, there is menorrhagia; in some few cases the catamenia are diminished, or they are completely suppressed; but whether they are increased or diminished, leucorrhœa almost invariably attends, and is generally more or less profuse, in proportion to the duration of the general disorder. When the catamenia are profuse, they are usually in the earlier part of the period dark-coloured and grumous. At p. 88 of his interesting work on neuralgic diseases, Mr. Teale gives the particulars of a case, in which considerable uterine disturbance coexisted with much derangement of the general health, and more particularly of the chylopoietic organs, in which the spine was tender throughout, and where treatment directed to this condition proved eminently successful. Dr. Griffin informs us, that painful affections of the uterus dependant upon irritation of the lumbar portion of the cord, are of much more frequent occurrence than any previously mentioned; and he refers particularly to hysteralgic affections, to dysmenorrhœa, to menorrhagia, and amenorrhœa. Of dysmenorrhœa, he says, that patients subject to it are also very often the subjects of general irritation of the spine. Menorrhagia and amenorrhœa he describes as less doubtful results of this state, the former being exceedingly common. Mr. Burns, of Glasgow, has written a valuable paper on the subject of spinal irritation, and has especially drawn attention to the connexion which exists between sacral tenderness and painful conditions of the uterus and bladder; and Mr. Tate has published a small volume on the coincidents of spinal tenderness with hysteria generally, and has given several cases illustrative of the benefit which has resulted from counter-irritation over the spine by means of the tartar emetic ointment.

With regard to the particular forms of uterine derangement which are met with in connexion with this affection, I find, on referring to the twenty-six cases which I have tabulated, that—

Hysteralgic affections occurred in	18	Amenorrhœa in	2
Dysmenorrhœa in	9	Leucorrhœa in	13
Menorrhagia in	4	Menstruation was irregular in	2

But these affections were variously associated in different individuals: a fact which of itself would almost point to a constitutional origin. The predominance of hysteralgia is very striking, and has been noticed in general terms by other writers. It also favours an opinion which I formerly ventured to express upon more general data, that impressions made upon the uterine organs, from or through the cerebro-spinal system, rather give rise to painful and uneasy conditions, whilst those received from or through the medium of the ganglionic system

of nerves, rather give rise to functional disorders in regard to nutrition and secretion. It is, however, necessary to bear in mind, that the causes of uterine disease are, for the most part, of a complex nature; that the cerebro-spinal and the ganglionic system of nerves are often concurrently disturbed, and that they thus reciprocally react upon the uterine organs, so as to give rise to very mixed and complex forms of derangement.

But spinal irritation, although I believe it to have important relations to uterine pathology, must not be supposed to constitute the sole medium by which nervous derangement is conducive to uterine disease; nor is it a consequence solely of such mental conditions as have been referred to. It may arise from depression of the general health, impoverished states of the blood, and various local irritations reflected upon the medulla. And uterine disorder may arise altogether independently of spinal irritation or mental influences. Whatever indeed tends to depress, disturb, or to embarrass the actions of the nervous system, will either directly or remotely produce it. For it is an admitted axiom, that the healthy performance of every organic function is dependent in a great measure upon the integrity of this system, the due generation of nervous energy, and its proper distribution to the several organs of the body. But none are so liable to suffer from a defective or irregular distribution as the uterine;—there are none which sympathize more largely with the constitution or the nervous system in its several physiological and pathological conditions. It is upon the uterine organs that all the impressions made upon the female organism, whether physical or mental, are either directly or indirectly reflected; and none are influenced so powerfully by the various affections and passions of the mind. Can it then be doubted, that in the mental phenomena, or rather in painful and uneasy states of mind, whether emotional or intellectual, we have a powerful and frequently operative source of uterine derangement, which it is important to recognise and to appreciate?

Nor can it be denied, that there are circumstances of an extrinsic character, which bear closely upon the subject under consideration,—circumstances which are connected with the social condition of the female, which give force and intensity to the operation of causes which might otherwise be harmless. It cannot for instance be doubted, that in the restraints, the refinements, and the education to which the female constitution is subjected as society is constituted, there are to be found important elements tending to the causation of disease. No class or grade of society possesses an immunity from social evils, whatever may be its social advantages. The more developed is the mind, and the more refined are the feelings, the greater will be the susceptibility of both to the influence of disturbing causes, and these are to be met with to a prolific extent in the anxieties and cares, the troubles, the disappointments, and perturbations of mind to which each in his social capacity is subject, and from which no class is exempt. It is true that the troubles of one person are not exactly the troubles of another, nor do those of one grade of society correspond exactly with those of another; but upon the whole, the actual amount of good and evil, of suffering and enjoyment, is pretty equally distri-

buted; and accordingly we observe a great similarity in the diseases which prevail among different classes of the community, however opposite may have been the stations of different individuals, and however different may have been the causes, whether physical or moral, which may have co-operated to produce them.

But it may further be affirmed, that the treatment of uterine diseases cannot be successfully carried out if these circumstances are disregarded, or if the relations which subsist between the nervous and the uterine systems, in their physiological and pathological conditions, are overlooked. Mental affections are not, of course, susceptible of direct cure by medicine, but the physical disorders they give rise to frequently are, if properly investigated and treated; and in this investigation, it is necessary to study attentively the order and sequence of the morbid actions which ensue. In this order and sequence, the affection of the spinal cord, which I have been considering, claims our especial attention, not only as forming an intermediate link between psychical and uterine affections, but as constituting, in many cases, a distinct pathological condition, calculated in itself to react injuriously upon the uterine organs, and the removal of which is absolutely necessary for that of the uterine malady. The treatment, moreover, of this condition, is sufficiently simple and successful when properly recognised. It comprehends little more than regularly repeated friction over the spinal column; counter irritation, more or less active, over the tender portion, continued for longer or shorter periods, according to the persistency or acuteness of the spinal irritation; while in extreme cases, a few leeches may be usefully applied to the seat of irritation when this is very acute. These measures, together with moderate and regular daily exercise, attention to diet and regimen, and such general hygienic measures as are calculated to improve the general health, appear to me to comprehend all that is necessary for the cure of spinal irritation considered as an abstract affection. Some writers have recommended cupping and continued recumbency, but I have never met with a case in which the free abstraction of blood would have been justifiable; neither should I anticipate any benefit from continued recumbency. On the other hand, regular exercise has appeared to have been of the utmost service, and more especially when combined with change of air and scene, and such circumstances as operate agreeably on the mind.

The benefit which I have seen result in the treatment of uterine affections, connected with irritable states of the spine, from such simple measures as I have mentioned, leads me to regard the spinal affection as being in many cases an original lesion, and to differ from those who look upon it as being merely subordinate, or incidental to the uterine. And when writers speak of the derangements of the nervous system, of the various pains which are felt in the abdominal and pelvic viscera, of the sensations which are complained of in their neighbourhood, and point to remote disorders as the direct consequence of uterine irritation, and the symptoms by which uterine disease is denoted, I would venture to inquire whether they are not sometimes confounding with the uterine affection one which in its nature and origin is perfectly distinct? I am, I confess, led to adopt the affirmative of this question, when I find that the history of these cases points in nearly

all to an antecedent disturbance of the nervous system; and I am strengthened in this view, when I observe the symptoms of uterine disease in some cases to disappear without any specific treatment, by simply directing remedies to the spinal cord and the nervous system generally. On the other hand, I am not induced to relinquish this opinion on finding that such measures sometimes fail of their intended object, because I know that the causes of spinal irritation are at the same time those of various associated disorders of other organs, which, together with that of the spinal cord, originate and maintain a state of uterine irritation and disorder. But I am above all convinced of the truth of the position which I have assumed, when I meet with cases in which these affections have co-existed with uterine derangement, and have been supposed to be dependent upon it, and where, conformably with this view, it has been sought to remedy them by the constant, repeated, and persistent, but unsuccessful employment of measures specifically directed to the uterine organs, for periods varying from one to two years, and this, too, by practitioners of authority and eminence.

(To be continued.)

Chester Place, Hyde Park Gardens, October 1851.

THE FIRST OF OCTOBER 1851.

By AN OCTOGENARIAN.

The first of October is an interesting day to the medical profession: on it the different schools are opened, at which such acquirements and knowledge are to be obtained as will qualify the pupil to pass his examination at Apothecaries' Hall, at the College of Surgeons, or at the College of Physicians; and the public journals have announced more than twenty well-provided lecture-rooms, at colleges, hospitals, halls, and private institutions, where the necessary instruction may be acquired.

Anterior to the year 1815, few medical schools existed, and those were very incomplete, with the exception of those founded for anatomical and surgical teaching; but even upon these the attendance was not compulsory, and many persons practised as physicians, surgeons, and apothecaries, who had never attended a single course of lectures, or witnessed one dissection. In the year 1814, at the seven London Hospitals, namely, St. Bartholomew's, St. Thomas's, St. George's, Guy's, the London, Middlesex, and Westminster, there were only thirty-eight physician's pupils; in less than twenty years after the Apothecaries' Act passed, they increased to three hundred and twenty-six, and are now still more numerous.

The first important incentive to a more careful and appropriate medical education was effected by the privilege, granted by Parliament to the Society of Apothecaries in London, of electing a Court of Examiners, to inquire into the competency to practise medicine of all future apothecaries throughout England and Wales. This bill passed

through Parliament in the year 1815, but so little did the upper ranks of society estimate the value of a sound medical education, that after being, with great difficulty, got through the House of Commons, it at last passed the Lords by the paltry majority of ONE.

Some years afterwards, when, as one of the consequences of this Act, it became necessary to render the study and practice of anatomy more easy and unobjectionable, and when a bill was brought into Parliament to effect this desirable object, the measure was strongly opposed, and more than one honourable member urged as a most cogent reason against it,—that though a knowledge of practical anatomy was indeed required by surgeons who had operations to perform, yet, for physicians and apothecaries, a sufficient knowledge of anatomy might be gained from plates, from wax and terra-cotta models, from skeletons, and such preparations and dried specimens as were always to be found in museums and repositories.

Even in our own days, woefully deficient is the encouragement bestowed upon the medical man; and if there were not some redeeming exceptions, some cheering moments of comfort, his course would indeed be gloomy and overpowering; for he must often feel that his worth and his usefulness are unacknowledged, his fatigues and his anxieties unheeded, and his unselfishness and disregard of lucre derided and abused. The man—the individual—indeed, is often greatly beloved and respected; but the profession—the great body of practitioners — holds not that honoured rank in public estimation which it so justly merits. While labouring and toiling in the divine employment of striving to diminish the woes of his afflicted fellow-creatures, it cannot fail to mortify the honourable pride of an honourable practitioner to witness how much the palpable absurdities and deceptions of homœopathy are patronized by noblemen and influential commoners; how wonderfully strange it is, that clergymen should combine with infidels and atheists in practising Mesmerism; and that government itself does not disdain to derive a large revenue from quackery,—quackery, the very essence of which is falsehood, and which can only be sustained by the publication of advertisements and books of the most obscene, prurient, and disgusting character that can be imagined.

And yet, surrounded as it is with difficulties and discomforts, the art and science of medicine has steadily pursued a course which has placed it in a very high state of elevation. Let us then take a retrospective view of what medical practice was a hundred years ago, and we shall not be ashamed of what it is now.

Dr. Hulse, a physician of great eminence and reputation in the reign of Queen Anne and her two successors, was in 1738 appointed physician-in-ordinary to King George II, and was created a baronet. He died April 10, 1759, aged 74. His practice was very large and lucrative, and Dr. Heberden bears testimony to his "judgment and sagacity". Dr. Heberden likewise mentions his partiality to the bark,[1]—the Peruvian bark,—which he had "prescribed for forty years, more than any other physician out of England, and as much as any one in it".

[1] Transactions of the Royal College of Physicians, vol. ii, p. 15.

Among the many distinguished patients of Sir Edward Hulse, one of the most celebrated was the Earl of Orford, more generally known as Sir Robert Walpole, who died March 18th, 1745, after a very painful illness, and who gave his own "solemn injunction" to be opened after death by Mr. Ranby, "in order that he, who could no longer survive to profit mankind, might be the means of conveying to them what good he could after his death."

Ranby's narrative is neither erudite nor attractive; yet his statement of facts contains materials which could hardly fail to excite inquiry and discussion, especially among those who were exercising, in its various departments, the practice of medicine; so that if the noble lord's solemn injunction did not immediately effect all the good that in his dying moments he perhaps expected, yet it was doubtless one of the quiet contributory streams which began the improvements in medical and surgical science, and which will continue to move on

"——— in omne volubilis ævum."

The narrative[1] states, that in the spring of the year 1744 Lord Orford had an attack of intermittent fever, for which, by the advice of Sir Edward Hulse, he took the bark with good effect, and retired for a short time to Richmond-park. Here, one day after dinner, he was suddenly "seized with great pain in the head, giddiness, violent sense of sickness, and frequent inclination to vomit"; in addition to which, he suffered "intense pain in the back, and passed coffee-coloured urine". It might be expected that such a series of symptoms would have been considered sufficient evidences of a distinct and alarming attack of disease, but it was hastily and inconsiderately attributed to "a return of the intermittent fever, attended with some nephritic symptoms", and the bark was again prescribed, "some regard being had to these nephritic symptoms".

It may well be supposed that the symptoms here mentioned did not yield to the bark; the "hard and full pulse" was therefore attacked by venesection, and "he was bled in the arm even to three times" before this alarming symptom gave way, and the coffee-coloured urine ceased to be discharged. His lordship's medical attendants appear to have contented themselves with *conjecturing*, for it was only conjecture, that some concreted matter in the kidneys had passed into the bladder, and it was expected that what had thus passed into the bladder would be speedily expelled through the urinary passages; "but as these expectations were entirely fruitless, a doubt began to prevail whether it were anything more than a gravelly affair, accompanied by some symptoms produced by intermitting fever"; and this inconclusive reasoning being allowed to have more weight than it merited, the use of the bark was returned to and persevered in, under different forms, for six months.

The quietude which this severe attack made necessary, and the abstaining from *much* wine,—"for he was so abstemious as to drink only a little sack",—kept Lord Orford's complaints within some bounds for a considerable space of time; but in attempting to make a visit in an "extremely easy chariot", he felt an unusual irritation to

[1] A Narrative of the Last Illness, etc. By JOHN RANBY, Principal Serjeant Surgeon to the King, and F.R.S.

make water, and the urine was tinged with blood; and this irritation and bloody urine continued to distress him, unless in a state of absolute rest. It may easily be imagined that a surgeon would, under such circumstances, suspect stone in the bladder, and Mr. Ranby expressed his opinion that this was the case. But physicians and surgeons did not conduct themselves towards each other in those days as they do now; and "as the blood that came away was judged absolutely by the physician to proceed from the kidneys, this symptom was deemed of no material consequence", and his lordship was allowed to return to Norfolk, no attempt having been made to ascertain what was the actual state of the bladder.

With, upon the whole, little difficulty, he reached Houghton in July, and remained there under the care of Dr. Hepburn till November: he kept himself very quiet and retired, took largely of marshmallow tea, and other demulcents, and avoided much exercise or exertion. Several times, however, when using gentle carriage exercise, he was much distressed with pain and irritation, and occasionally tinges of blood were observable in the urine: these symptoms were sometimes mitigated by taking manna in cream of tartar whey; indeed, Dr. Hepburn's treatment was soothing and judicious.

Lord Orford returned to town in November, but his journey was performed with great difficulty, occupying the space of four days. On the last day, in travelling twenty miles only, he suffered excessive torture; "he was obliged to alight from his chariot at least twenty times, and every time subjected to a discharge of almost pure blood, with excessive pain". Sir Edward being again called in, "and having heard all the particulars from his lordship's own mouth", gave it as his opinion, "that the seat of the whole disorder was in the kidneys, insomuch as the bladder being furnished with but few blood-vessels, could not supply any great quantity of blood; and besides, that almost all discharges of blood proceeded from the kidneys."

Ranby expresses his regret at differing in opinion from a physician of so great experience, but he "was sufficiently convinced that the stone in the bladder was the sole cause of all this tragedy". This opinion, however, was strangely slighted, especially as in a former illness, ten years ago, a small stone had passed through the urethra; and in Norfolk, while under Dr. Hepburn's care, much gravel and one or two small stones had in the same manner passed away.

Under these circumstances, "a soft and diluting method" was prescribed and persevered in for about three weeks, when Dr. Jurin,[1] the inventor of a lithontriptic medicine, was called in as consulting physician with Sir Edward Hulse. "*Searching*" was now proposed, but Dr. Jurin was so well convinced that there was a stone in the bladder, as to render the introduction of a sound unnecessary. At this consultation it was determined that a dram of the doctor's *lixivium lithontripticum*, made into a draught, or rather a potion (for it amounted to seven ounces), should be taken three times a day. The dose of the

[1] Dr. Jurin distinguished himself early in the last century as an advocate for the newly introduced inoculation of the small-pox. He was a very eminent physician, and became President of the College. The exact composition of his lithontriptic is not generally known, but the principal and most efficacious ingredient was the caustic potash.

lixivium was gradually increased, and between the 15th December and the 4th of February, "six and thirty ounces of this lixivium were taken", variously combined with stomachics, cordials, etc., as seemed necessary. The effect of this remedy appears to have been considerable in disuniting the calculous concretions, but at a grievous expense to the mucous membrane, and indeed, to the entire structure of the bladder. Frequent discharges of pieces of calculus, more or less cemented together, excessive pain, and profuse hæmorrhages, harassed the poor sufferer most cruelly. "On the 9th of January particularly he had a more than ordinary flux of blood, attended with greater pain than he had ever yet felt, at the end of the penis. . . . . In the evening he voided as much gritty matter as would cover a shilling, of the colour of common house sand, and looking as if wrought together with gum-water." "February 4.—About nine he discharged a great quantity of blood, and soon after complained of an intolerable pain in the penis. Mr. Ranby extracted from the urethra a stone exceeding the dimensions of the largest kidney bean. About one, he felt a strong irritation to make water, which was followed by a large discharge of blood, a good deal of it coagulated, in which were found eleven pieces of stones, some of them smooth and rounded on one side, and scraggy on the other; some sharp and pointed on all sides, as having been inner parts; but not one of these that did not evidently appear to have been a part of some larger stone. These fragments were whitish, but in the stones which were entire the parts of the joinings were streaked with yellow veins, resembling in some measure Mosaic pavement". These discharges of blood and portions of calculus continued through the day, but in the evening "an extraordinary coagulation of blood was discharged, but there could not be discovered any concreted substance, till the coagulum had been dissolved in a large basin of water, when about fifteen pieces presented themselves, one of which was a stone, near entire, and almost as big as the great one in the morning". This seems to have been the last evacuation of calculi; but the hæmorrhage continued profuse, and the patient was reduced to a most extreme state of lassitude and debility, in spite of the bark, which was again prescribed in various forms, but with, of course, little or no advantage. The fragments of calculus of all sizes exceeded forty in number.

Dr. Crowe was now called in, who appears to have agreed in opinion with Sir Edward, that the blood discharged was supplied by the kidneys, "it being in reality his sentiment, that all discharges of blood through the urethra flowed, not from the bladder, but entirely from the kidneys". Dr. Crowe did not recommend any particular mode of treatment. From this time, though the patient's progress was duly watched, and his pains occasionally relieved by opiates, nothing of importance is recorded, except some ineffectual attempts by Ranby and Cheselden to introduce the catheter. On the 18th of March, 1745, the friendly hand of death released the noble earl from the intense sufferings of a most afflicting disease.

It is a curious circumstance, that the announcement of Lord Orford's death, in the *Gentleman's Magazine*, stated that he had died of inflammation of the lungs.

The *post-mortem* examination, signed by "E. Hulse, J. Ranby, W. Cheselden", states that the bladder "had expanded itself above the

os pubis at least four inches: on cutting into the cavity, there issued a quantity of urine, with three large clots of coagulated blood, which no doubt had lain there some time. On separating the bladder from the parts with which it was connected, and dividing it from the neck to the bottom, several inflamed spots were observable, with an inflammation quite round the neck, about the breadth of two inches, and a lodgment in the membrane of several small stones about the size of half a grain of wheat. Its substance was of a very unequal texture, innumerable ridges as thick as the eighth of an inch, and many of them much larger, running across one another through the whole capacity of it, while the spaces between those ridges were as remarkably thin and transparent. The prostate glands were enlarged, and become harder than they commonly are. No defect was discoverable in the kidneys or ureters, though the pelvis was larger than usual." Nothing is said in the *post-mortem* examination about the state of the lungs.

A perusal of this case will not impress the reader with a favourable opinion of the practice of medicine in London anterior to the reign of "good old" King George III. Investigations into the nature, causes, and progress, or the probable results of diseases, seem to have been conducted with little nicety or exactness. The first symptoms of disease were not accurately analysed, and those which presented themselves during its progress were too often overlooked or neglected. Nor was there much discrimination in the choice of remedies; indeed, the virtues and value of the most important articles of the materia medica were neither well ascertained nor duly appreciated; but reliance was placed on old forms and combinations of remedies, which were prescribed rather to the name by which the disease was called, than to the symptoms by which its nature was to be learned and its management directed. The "judgment and sagacity" of Sir Edward Hulse enabled him to treat ordinary diseases with effect and advantage; but whosoever deals largely in any one course of treatment by the bark or any other remedy, shews little discrimination, or that amount of penetration which is required from an accomplished physician.

The so-called consultations of old were anything but deliberative and confidential: they were rather meetings of formality, at which the authority of one overruled the others; and the surgeons had rarely influence when they visited with physicians. When old Radcliffe was called in, he was the paramount: very few physicians could offer advice when he was present.

There were other physicians besides Dr. Jurin who possessed their particular *nostrums*; and when the nostrum was strongly recommended, and thought likely to cure any malady, it could not generally be separately purchased, but the inventor was called in to superintend and direct its use. Thus when Jurin and Hulse consulted about the employment of the lithontriptic, it had already been resolved that Lord Orford should take it; and though Sir Edward was of course told what the most important ingredients were, yet he probably was not acquainted with its actual composition. Dr. James used at first to be sent for, not because his skill was wanted, but because James's fever powders had been spoken of as the sure and only remedy. No doubt it became more lucrative when advertised and sold in packets, than when obtained by feeing the doctor. M.

BIBLIOGRAPHICAL RECORD

THE SPINE: ITS CURVATURES AND OTHER DISEASES, THEIR SYMPTOMS, TREATMENT, AND CURE: to which are added some Remarks on Paralysis. By CHARLES VERRAL, ESQ., Surgeon to the Hospital for the Cure of Distortions, etc. etc. London: 1851.

THIS work, which is extended to 234 pages, might with much advantage to the professional reader have been compressed into one-third of that space.

We are indebted to the author for the description of a lighter, more elegant, and, we believe, more effective apparatus than has hitherto been introduced for the treatment of lateral curvature of the spine. The instrument, moreover, possesses one great advantage, viz ; that all its moveable parts are simultaneous, regulated by one simple screw. Different forms of the apparatus are represented by wood-cuts in various parts of the work, and, as far as the mechanical contrivances are concerned, we conceive that much credit is due to MR. VERRAL. We sincerely wish that we could have expressed ourselves equally satisfied with the more strictly medical portions of the work.

The second and third chapters are devoted to the subject of the LATERAL CURVATURE OF THE SPINE, in which the author advocates a plan of treatment consisting of alternate exercise and repose ; and points out that the recumbent position may have its advantages for such cases, as well as those means which are more directly calculated to remedy the debility in which the affection usually commences. The fact is clearly illustrated that in lateral curvature the vertebræ are not only inclined to one side, but are frequently rotated to a certain extent upon each other. The articulating surfaces by degrees become accustomed and adapted to the new position, and it is impossible to alter their directions, so long as the superincumbent weight of the head and shoulders tends to retain them in their abnormal situation. In the recumbent position, the articulating processes may be opposed by different corresponding surfaces, and by such portions of them as have not been altered in form by superincumbent pressure. For these reasons, we agree with Mr. Verral that the recumbent position, during certain periods of the day, may be of advantage in the treatment of lateral curvature of the spine.

We must, however, entirely dissent from the author when he says (p. 21), that marked benefit may be derived from putting the patient under such a course of medicine and regimen generally as should tend, in a slight degree, to produce temporary debility. "It must be pretty evident," he says, "that the more debilitated the system, and the more relaxed and flaccid the structures upon which our operations are to tell, the more readily will the deformity yield to the curative agency." We here approach the doctrine of the homœopathic school—want of power and its effects are to be cured by relaxation. If, indeed, the affair were one strictly of a mechanical nature, then, indeed, the softer and more pliable the parts, the more easily might we mould them to our will: but this is not so.

We are told (p. 8), that one of the causes of lateral curvature of the spine is, that "the ligaments become elongated, thin, and paler in colour"; and yet that it is advisable to commence the treatment of such cases "by inducing a certain amount of physical debility and consequent pliability of those structures upon which the mechanical contrivances are brought to bear"! (p. 21.)

The fourth chapter of the work is devoted to CARIES OF THE SPINE. Mr. Verral, in his preface, gives us a list of works that he has consulted to aid him in his investigations ; and we cannot help feeling, that in addition to those he has named, it would have been more satisfactory had he included

the work of Sir B. Brodie on the joints, especially in reference to the treatment of the caries of the spine. Sir B. Brodie informs us, in his later editions, that he has long given up tormenting his patients suffering from scrofulous affections with blisters, issues, and setons. Mr. Verral, on the other hand, maintains that in caries of the spine, great benefit will attend the guarded employment of counter-irritation, and that he is somewhat prepossessed in favour of issues in severe cases. (pp. 146-7.)

In the fifth chapter, PARALYSIS, proceeding from disease of the spine, is treated of. Here, we have still to remark the exclusively mechanical view which the author takes of the diseases of which he treats, and of their supposed "cures". The first step to be taken in the treatment of paralysis, is to change the patient from the supine to the prone position, which shall at once "occasion any fluid agent that is making pressure upon the cord to change its situation, from the simple circumstance of gravitation". (p. 172.) In the chapter on angular projection, Mr. Verral says that he is in the daily habit of witnessing the disease in every varying stage of its distressing career, and "if the malady be not arrested in its incipiency, it goes on to the formation of abscess, extreme debility, hectic, and probably death". (p. 119). But in the chapter on paralysis resulting from angular curvatures, he says, that by steady perseverance in the treatment recommended, "restoration is, humanly speaking, certain". (p. 173.)

The chapter on RICKETS, furnishes us with another remarkable instance of the tendency displayed throughout the work to explain everything by reference to mechanical laws. "One phenomenon in connexion with the disease is the excessive precocity of intellect which characterizes its victims, a circumstance that would seem to result from the premature devolopment of the brain, *owing clearly to the softened condition of the cranial bones offering less resistance to the rapid increase of the cerebral masses.*" (p. 231.) Had not nature, therefore, made the mistake of prematurely closing up our skulls, we should be a much more intelligent race than we now are!

The last chapter treats of SPINAL IRRITATION, or hysterical affections of the spine. Mr. Verral supposes, that in some cases this affection would appear to originate from a low, chronic, inflammatory state, either of the membranes of the spinal cord, or the coverings of the nerves as they pass out from the medullary canal—neither of which conditions involve any actual alteration of structure in the parts affected. (p. 222.) No attempt however is made, either by cases or otherwise, to prove the correctness of this opinion; and we must confess ourselves at a loss to understand what is meant by chronic inflammation, which produces no change of structure. "The recumbent position—particularly, or, I should say, exclusively, the prone—is of eminent service, and should be employed in the early treatment of the disease, with but little intermission"! (p. 223.)

In the first case of this supposed affection cited, a delicate, nervous girl, 17 years of age, who had for the most part led a sedentary life, was placed upon a prone couch, and a succession of blisters were applied over the fancied seat of the disease, whilst the slightest attempt at motion was forbidden. "At the expiration of two months or ten weeks, she was permitted to take gentle exercise in her ward." This is not, it must be admitted, a very encouraging result. In a second case, in less than *three months* the patient had so far recovered (?) as to be allowed to walk out daily for an hour with the aid of an instrument. (p. 233.)

Such cases really do not deserve a serious consideration, nor should we have noticed this part of the work, were it not to distinguish it from that in which some mechanical defect or contrivance is described. For this, which we should have much liked to have seen published in a separate form, we give the author every credit; but we would suggest to him, that in treating the subject as a whole, the laws of life must be studied and described, as well as those of mechanics.

On Bubo and Perinæal Abscess. By John L. Milton, Esq., M.R.C.S., pp. 32. London: 1851.

The pamphlet before us is printed for private distribution. Its principal object is to advocate the use of tartar emetic in cases of bubo threatening suppuration. The result of this treatment in the author's hands is stated to be,—"that in almost every case in which it was properly carried out, resolution was effected if the case came early enough under treatment; and that even in those in which suppuration had proceeded to a considerable extent, an immediate arrest of all the prominent symptoms was obtained" (p. 12).

The same plan of treatment is advocated for abscess in the perinæum.

In both cases the inflammation is treated of as if it were an abstract essence, while the *cause* of the symptoms is not once touched upon. If the author had considered *what* it was which in either case gave rise to the inflammation, we venture to believe that he would no longer entertain the idea that the evil could be removed by simply diminishing the vascular action of the part.

In syphilitic bubo, there is a poison in the part to be got rid of; and in perinæal abscess, there is usually an escape of urine from its usual channel. The inflammation and suppuration in both cases are attempts, either to limit the effects of, or to eliminate, the offending matter, and simply to "hint back" (p. 28) the actions which nature sets up, is nothing more or less than to attempt to frustrate the intentions for which those actions were instituted.

The reception of the author's practice in the particulars now referred to, he has candidly stated in his preface.

"I am not aware that I have made a single convert to my views, except among my patients. By my professional friends my opinions have been utterly neglected, or met with objections."

Prevention and Cure of many Chronic Diseases by Movements. An Exposition of the Principles and Practice of these Movements for the Correction of the Tendencies to Disease, in Infancy, Childhood, and Youth; and for the Cure of many Morbid Affections of Adults. By M. Roth, M.D. pp. 302. London: 1851.

Dr. Roth's name appears in the *Medical Directory's* list of homœopaths; but like other speculators of the same class, he tries to have two strings to his bow. It appears that Kinesipathy, like the other *pathies*, may be united with homœopathy; though each, when occasion requires, must be lustily proclaimed to be a complete system of therapeutics. Mr. Everest preaches that, Christianity was of little use till Hahnemann appeared; the Bishop is silent, and the *Homœopathic Times* endorses the blasphemy. Why then may not Dr. Roth inform as many of the quack-fanciers as he can gather round his standard, that homœopathy itself, (notwithstanding all that Hahnemann and Mr. Everest have said to the contrary), is often in need of a help, and that that help is the new *pathy*—Kinesipathy—practised to admiration in London by the author?

Kinesipathy is a term derived from two Greek words, Κινέω, I move, and πάθος, a disease. It is the name of a medical system invented in Stockholm, by a fencing-master of the name of Ling, who gradually transformed his gymnastic academy into an hospital. Ling, like many who trade on the gullibility of mankind, was a man of great shrewdness; and he appears likewise to have been a poet of some fame in his native town.

Dr. Roth has served up the science of Lingism very nicely for the London public; and we have no doubt that he may, in virtue of the attractive woodcuts, the elegant getting up of his volume, and the outrageous absurdity of

its contents, divide some of the spoils of Belgravian folly, with fashionable Mesmeric maidens, homœopathic, and hydro-homœopathic doctors.

Gymnastic exercises are undoubtedly most important in the cure and prevention of many diseases; and so have they ever been regarded by the medical profession. We have no more objection to the use of movements—riding, dancing, fencing, swimming, etc.—in the treatment of disease, than we have to the use of water as a therapeutic agent. Exercise and cold water are and ever have been remedies much and deservedly esteemed by physicians; but Kinesipathy and Hydropathy are merely vile trading systems of charlatanry, built upon the foundation of the virtues of these means when judiciously used.

The work of Dr. Roth consists of an introduction, and of chapters on the history, on the theory, and on the practice of the system. Mingled with much nonsense, there is some sense, but wonderfully little, considering the inherent excellence of the subject—medical and hygienic gymnastics. The general scope of the work may be sufficiently gathered from the following extracts: a formal analysis of the book would be out of place in a journal devoted to medicine.

Treatment of Gonorrhœa. "The prescription in gonorrhœa is generally (besides some movements depending upon particular circumstances) the following:—

"1. Percussion on the sacrum, in the stride-standing position.

"2. Transversal chopping on the neck, in a sitting position.

"3. Pressure above the os pubis, in the lying position, with elevated back, while the separated and bent legs are drawn towards the abdomen.

"4. Vibration of the perinæum in the same position.

"The treatment begins with percussing the sacrum in the stride-standing position, which in the first day or two not only allays and relieves the more violent inflammation and copious secretion, but also changes the whole state of the disease in such a manner, that the following treatment by movements, (different according to the state of the patient), produces an increased flow of arterial blood in the upper extremities, and the cure is very much accelerated. In the first stage, during which only a moderate stitching pain, tension, and little secretion appear, the percussion on the sacrum is alone sufficient, if repeated three or four times daily. If the symptoms become more violent, and accompanied by chordee and pains during urinating, etc., then other movements are necessary; they make use of the transversal chopping of the neck, which acts strongly against the chordee, and of the pressure above the os pubis in the above mentioned lying position, which increases the venous absorption of the bladder and sexual organs, by its effect on the excited nerves of these parts.

"In the second period, if the urinating is very difficult, the perinæum swollen and painful, the discharge mixed with blood, and fever is present, then a more general treatment is necessary. To increase the more local absorption in the urethra, vibrations along the whole tract of the perinæum, from before backwards, are employed." (pp. 231, 332).

It may be necessary to give our readers the author's explanation of

Chopping, as described in one of his preceding chapters. It is as follows:—

"Chopping consists in alternative short blows produced by the external sides of both the operator's hands. Choppings are principally used on the posterior surface of the trunk, chest, and also on the limbs. If it is desirable that the succussion produced by this movement shall be less and softer, then the chopping is done with the external edges of the two little fingers, while the other fingers are spread apart, but not kept spasmodically fast, so that they act also by striking upon the little finger. Chopping may be confined to one part only, or may be exercised on a larger surface, by constantly moving the position of the hands. The chopping is called a *longitudinal* one, if the

hands are moved in the longitudinal direction of the trunk or of the limb, and a *transversal* one if the blows are executed across the limb." (p. 92.)

Suppressed Piles, it appears, are not amenable to the "harmonic medicine" of Hahnemann and Mr. Everest, *i. e.*, to real homœopathy, and therefore our author resorts to treatment which we doubt not the last named authority would consider quite as "frantic" as that of "the old school". This is the passage to which we refer:—"*Suppressed Piles, causing mental distress.* —After a sudden spontaneous or artificial stoppage of discharge of blood or slime, persons suffering from piles often become lunatics. These must be treated immediately, without any loss of time, by *movements acting very violently on the brain*, which must all be done in a horizontal position, and *the patient must be overturned, and as quickly as possible kept up and down by the assistants.* Many fear this overturning, because they wrongly believe that the blood acts only by its weight, and that it comes in too great a quantity to the brain. If the first were the case, the blood would never flow to the head in an upright position ; with respect to the too great quantity, the blood is pressed on to the brain only, if the patient being nervous retains his breath, and actively resists while his trunk is moved up and down." (p. 227).

In all this the reader will observe that nux, lycopodium, and lachesis, etc., are never once mentioned by the homœopathic Dr. Roth. Well, truly, was it said at Brighton, that the dupes of homœopathy "have no conception of the vastness of its absurdity, and of the Protean wiles with which, setting honesty, consistency, and common sense at defiance, it bewitches the sick and the silly."

Report of the Speeches on Irregular Practice, delivered at the Nineteenth Anniversary Meeting of the Provincial Medical and Surgical Association, held at Brighton, August 13 and 14, 1851. pp. 32. London : 1851.

The various medical journals contain from time to time admirable exposures of the delusions and frauds practised by homœopaths and other irregular practitioners ; but from the fact of professional periodicals not being suited for general perusal, we can hardly afford our patients, when they ask it, an opportunity of reading the opinions of medical men upon any prevailing or fashionable quackery. On the other hand, all the modern systems of charlatanry have journals in aid of their cause, which are obviously written solely for the public. Hygeism has its monthly *Hygeist ;* homœopathy has its *Homœopathic Times*, and other prints ; Mesmerism has its *Zoist*, et cetera ; and Chronothermalism sends forth monthly *The Chronothermalist.* The extraordinary success of all the systems advocated in these periodicals is chiefly owing to their zealous, and often clever, advocacy by a stipendiary press, arrayed in the garb of pseudo-science. Quack medicines, in fact, are now being displaced by quack systems: and Professor Holloway will soon find that if he is to continue to work Lord Aldborough's leg successfully against Drs. Quin and Ransford's Mercurius, he must bring out, weekly, or monthly, *The Holloway Times.*

However much we may deplore the spread of quackery, we, as medical men, cannot do more, as regards the public, than point out our determination to keep aloof from it : and to this extent, as honest men, we are bound to go. The Brighton Speeches are particularly well suited to point out to the public, that the attitude of the Association, and we may add, of the whole profession, with regard to homœopathy, is not one of opposition, but one of defence ; one which the Association was called on to assume, to preserve its respectability, and to entitle it to maintain its position as a society of honourable, truth-seeking, and scientific men. We, therefore, strongly recommend this pamphlet, as a publication admirably calculated to explain to intelligent laymen the real position which the profession has assumed towards homœopathic practitioners.

ORTHODOX MEDICINE: An Address delivered at the Annual Meeting of the Bath and Bristol Branch (June 26, 1851) of the Provincial Medical and Surgical Association. By JOHN ADDINGTON SYMONDS, M.D., President for the Year. Worcester: 1851.

This is a very admirable address. Many of the topics are similar to those discussed in the Brighton speeches, and in other recent pamphlets; yet there are important subjects touched upon, which are not adverted to in them, or, indeed, in any authoritative publication. Dr. Symonds uses the plain and explicit language of an honest man; and yet, (notwithstanding the badness of the persons whom he has to characterize), he avoids all coarseness of expression.

It is fortunate for the profession when physicians and surgeons of deservedly high reputation, acquit themselves of a duty by coming forward to denounce loose professional moralty, and charlatanic practices. With the public, such questions may appear to involve merely rival medical systems; but with us they involve the momentous alternatives of honour or infamy. Shall we for fees, or for anything else, hold professional intercourse with men who deride and malign us, and yet, when it suits thoir mercenary ends, represent themselves to the same public as belonging to our body? Shall we hold mock consultations with such persons, who, if they are honest in their professions, believe that medicine and surgery, as practised by us, are not only useless, but that they are in very truth the scourge and the curse on the community?

Passing over what is, perhaps, the best part of the address, we will extract one short passsage, as it touches upon a point which we do not recollect to have seen so plainly handled before; but which, from frequent experience, we suspect must be one of great moment to many practitioners. Often, very often, have we been sent for in cases of real or supposed danger, hurriedly, or during the night, by parties who in all slight ailments are in the habit of tampering with homœopathy. The quacks have received the greater part of the fees, and we have had all the responsibility and harassment; and sometimes we have been called when it was too late.

"I strongly advise my brethren," says Dr. Symonds, "to take an uncompromising part, not only by refusing to co-operate, even in the most indirect manner, with homœopathic practitioners, but also to show the public in what light we regard these marauders. I need not tell you that the only really remunerative cases to the general practitioner (except in the feeling of satisfaction in the discharge of an arduous duty, in the achievement of success in a difficult art, and in the thought of having saved a life, or assuaged pain and distress), are those in which his duty consists mainly in standing by the bedside of the patient, ready to interpose, if in his judgment any emergency arises; though they are cases to the cure of which nature alone is usually adequate. Nothing can really compensate him for the anxiety incident to the life-and-death encounters in grave cases, to say nothing of fatiguing days and broken nights. If, therefore, his attendance is sought by a family in such cases only, (and the instinct of the patient or his friends will generally lead them away from homœopathists on such occasions), he is justified in requiring that his reward should be very different from what it is when he has all kinds of cases submitted to him.

"I have no fear that this view of the case can be considered mercenary. Everywhere it is allowed, that from no profession is more gratuitous aid received by the public, and I am proud to believe that it is held to be one of the highest privileges of the profession that it has the power, and is allowed to render help to mankind as a labour of love. But as our patients often quote to us, 'The labourer is worthy of his hire,' so we may urge that the

hire should bear relation to the kind and degree of the labour. To employ a soldier on no service but fighting in pitched battles, bivouacking on malarious plains, or leading the 'forlorn hope' of a storming party, and then to tender him for such service the same pay as a soldier who is engaged all the year round in ordinary garrison duty, or in the light routine of the parade ground, in an exchange for the hardships and perils of a campaign, would surely be considered to be very unreasonable and very unjust, yet it is a case precisely parallel with that to which I have just adverted." (pp. 17-18.)

Manual of Human Physiology for Students: being a Condensation of the Subject, a Conservation of the Matter, and a Record of Facts and Principles up to the present day. To each subject are appended, in notes, Summaries in Rhyme of the Composition of the Fluids and Solids, etc. By John Morford Cottle, Licentiate of the Royal College of Physicians, London. pp. 303. London: 1851.

This book is professedly written for students to get up enough of physiology to pass their examinations; and the author modestly announces that he does not desire to contest the wider field, already so well occupied by Carpenter and Kirkes. With such students as will not try to master larger and profounder works, the present is likely to prove a favourite; and we must say that, excepting the poetry, it is of a grade very superior to the majority of those designed for the use of the lazy and the idle.

The author gives a summary of each chapter in doggerel rhyme, which summaries, we suppose, are to be committed to memory by those who have only time or inclination to get up their knowledge by rote, to serve them as rallying ground, when before a board of examiners. As a specimen of this style—a style long in vogue with grinders—we give Dr. Cottle's poem on the

"MOTIONS OF THE STOMACH.

"The normal motions of the stomach need
No motive power from th' vagus; and indeed
The gastric juice alike preserves its course,
As free as are the movements of the horse.
Like as the horse is ruled by spur and bridle,
The vagus urges on, or makes them idle." (p. 72.)

Lest Dr. Cottle should contemplate doing for anatomy what he has done for physiology, we beg to subjoin for his use a couplet much revered by grinders, and men when being ground:—

"The larynx is just under the skin;
But the pharynx is much farther in."

Manual of Physiology; including Physiological Anatomy. By Wm. B. Carpenter, M.D. *Second Edition.* With 190 illustrations. 12mo. pp. 616. London: 1851.

Dr. Carpenter has brought up his *Manual*, in this new and beautiful edition, to the present state of physiological science. Many alterations and additions have been made, as well as some omissions. This work is complete, without being too tedious for students: and to them we commend it as an admirable text-book. To those who may already possess one or both of Dr. Carpenter's larger treatises, the following passage from the preface is important:—"Although this Manual combines in some degree the scope of the author's *Principles of Physiology, General and Comparative*, and of his *Principles of Human Physiology*, yet it cannot be regarded as a mere abridgment of them, having been written, for the most part, with very little reference to them, and with every desire to make it complete in itself."

TRANSLATION OF THE PHARMACOPŒIA OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, 1851: with Notes and Illustrations. By RICHARD PHILLIPS, F.R.S., L. and E., etc. (p. 567). London: 1851.

This well-known and standard work we are glad to find has not suffered in any degree by the melancholy event which has delayed its appearance. In a prefatory advertisement to this edition, Mr. J. Denham Smith gives the following explanation of the circumstances under which the duty of editor devolved upon him.[1]

"A portion of this work, on the completion of which the author had been laboriously engaged within a few days only of his decease, had been already consigned to the press, when his widow and executrix placed in my hands the copious manuscript and explanatory notes of my late highly valued friend and former teacher, in order, that I might superintend its passage through the press. For the grateful task of editing this the author's last work, I possessed both the requisite leisure, and a long-standing acquaintance with his scientific views and methods of investigation; and most amply shall I be rewarded should I be deemed to have discharged this duty without detracting from the well-established reputation of the work."

In our opinion Mr. Smith has very ably and judiciously discharged his duty; and this, the last, is undoubtedly the best edition of Mr. Phillips' book.

The volume, like the *Pharmacopœia*, is divided into two parts: the first is devoted to the Materia Medica, and the second to the Pharmaceutical Preparations and Compounds.

The first part is little more than a translation of the original work. When required, however, clear and pertinent remarks are added on the tests; as in the case of acetic acid, iodide of potash, arsenious acid, etc. We have not space to critically examine this part of the work, but we may say that it seems to be well performed.

The second part is much more complete and useful than formerly. The diagrams and the notices of tests are improved; and the information regarding adulterations is greatly extended. Every article of the Materia Medica is separately treated of; and the manner in which the vegetable products are described, merits special praise.

We had intended to have taken this opportunity of entering at some length upon various topics connected with the *New London Pharmacopœia*, but we find that the demands upon the remaining pages of the current year render it necessary to postpone our remarks. In an early number of our volume for 1852, however, we hope to return to the subject of the *Pharmacopœia*, offering some criticisms upon its reviewers, as well as upon the work itself, its translators, and commentators. In the mean time, we have great confidence in commending Phillips' translation as a work admirably adapted to the wants of the prescriber, the dispenser, and the student. From its cheapness and elegance, as well as from its sterling value, we have no doubt of its having a large circulation, and a rapid sale.

[1] For an obituary notice of the author, vide p. 591 of our June number.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

BELLADONNA IN SCARLET FEVER: THE ESSAY OF DR. PEYRE PORCHER.

Dr. Porcher has published a valuable essay in *The Charleston (U. S.) Medical Journal*, entitled "A Collection of, and an Examination into, the Evidences respecting the Employment of Atropa Belladonna, as a Preventive against Scarlet Fever." As the subject is an important one, we reprint nearly the whole of the paper.

Dr. Porcher's Essay. "In this paper, in which the task is for the first time attempted, since the appearance of Bayle's *Bibliothèque de Thérapeutique*, (which contains a pretty complete summary of the facts in his possession up to the time of its publication), we have been at the pains to collect and bring into one view all the information to be obtained touching the efficacy of Belladonna as a Prophylactic in Scarlatina. It contains the results of an examination of about four hundred volumes.[1]

"We insert the following list of works, to save future inquirers the trouble of going over the same ground.

London Lancet, 53 vols.
Medico-Chirurg. Review, 20 vols.
Brit. and For. Med. Review, 21 vols.
Brit. and For. Med. Chirurg. Review, 4 vols.
Edinburgh Journal, 70 vols.
Braithewaite's Retrospect of Medicine, 21 vols.
Ranking's Half Yearly Abstract, 4 vols.
American Journ. Med. Sciences, Old and New Series, 44 vols.
Medico-Chirurg. Trans., 18 vols.
Dictionnaire des Sc. Médicales.
Dictionnaire de Médecine.
Archives Gén. de Médecine, Juin 1824, containing the original papers of Martini.
Medical Commentaries, by Duncan, 19 vols.
Bell's Bulletin.
—— Library.
—— Journal, 4 vols.
Chapman's Med. and Phys. Jour., 9 vols.
Gedding's Journal, 4 vols.
Southern Jour. Med. & Pharm., 2 vols.
Charleston Med. Jour. & Review, 3 vols.
American Medical Journals generally.
Bayle's Bibliothèque de Thérap.
Mérat and de Lens's Dict. de Mat. Méd., 7 vols.
Barthez, Maladies des Enfants.
Billard, „ „ „
Eberle on Diseases of Children.
Underwood „ „
Churchill „ „
Condie „ „
Meigs „ „
Watson's Practice of Physic.
Trousseau and Pidoux, Traité de Thérap. et de Mat. Méd.
Dickson's Pract. Physic.
Craigie's Pract. Physic.
Macrobin's Introd. to Pract. Medicine.
Davidson and Hudson on Fevers.
Cyclopædia of Pract. Medicine.
Grave's Clinical Lect. on Practical Med.
Pereira's Mat. Medica.
Chapman's Mat. Med. and Therap.
Dunglison's „ „ „ „
———— New Remedies.
Mitchell's Mat. Med. and Therap.
Cazenave on Diseases of the Skin.
Rayer's Traité des Maladies de la Peau.
Gregory's Lectures on the Eruptive Fevers, 1851.
Trans. of American Med. Assoc., 3 vols.

"From the *Dict. des Sc. Méd.*, under article 'Belladonna', we draw the following remarks: Administered in small doses, it acts on the nerves in a

[1] "In searching among some of those obtained from the Medical Society's Library, we have to express our obligations to the librarian, Dr. Lockwood, for his kind assistance."

way slightly analogous to that of the narcotics generally; but it possesses, in addition, a marked stimulating action on the general capillary system, and the exalant system more especially, from whence results abundant transudation, and the more copious suppuration from ulcers, a more free secretion of saliva, of urine, and sometimes even an increase in the menstrual flow, and of the alvine evacuations.

"Belladonna—(*Mérat and De Lens's Dictionnaire Univ. de Mat. Méd.*, 1849)—from whence we obtain the following, which are among the phenomena of poisoning by this plant, viz.: vertigo, weakness, a kind of delirious joy, hallucination of sight, faintness, nausea, dullness, conjunctival injection, dilated pupil, immobility, gesticulations, and inability to articulate sounds; small, weak pulse, sometimes accelerated, a kind of insensibility in the skin, terror, etc. After a condition characterised by stupor, accompanied with mobility of the tendons and paleness of the countenance, death closes the scene.

"We beg leave to quote from remarks by Mr. Ley, before the Royal Med. Botan. Society, in London *Lancet* for June 1844. From experiments upon his own person, he is of opinion, that belladonna is much less dangerous than many suppose. Instead of its 'diminishing sensation, irritability, and arterial action, in the first stage of its influence, he believes that it increases them all, and that the peculiar action of the remedy being exhausted, reaction takes place, and its effects, to wit—diminution of sensation, irritability and arterial action follow.' He observes that, 'soon after taking a grain of the extract, there is a peculiar taste in the mouth, and a diffused novel sensation over the whole body, which excites the attention forcibly and unpleasantly, saliva is secreted in diminished quantity. The nervous excitement becomes absolutely painful, with restlessness, and with the attempt to move, giddiness, with an affection of the cerebrum becoming evident. There is difficulty in swallowing, and the voice grows hoarse; it is as if the action of the parts were impeded by great loss of lubricating moisture of the mucous membranes.' The eyes and eye-lids also become dry; pain in the bowels may occur, and, perhaps, an evacuation, but neither purging nor diuresis is caused by it; 'sore throat and redness of the skin, resembling scarlatina, is sometimes produced, and inordinate menstrual discharge may occur suddenly in females. The attention is so entirely absorbed by the peculiar sensation, and the irritability of system, that no pursuit can be followed, the eye can see, but is indisposed to maintain attention to the object, and the ear has sensation and hears peculiar noises. The disposition to withdraw from all the excitements of passing influences becomes active, and the retirement, like weariness, brings repose.' In this stage of excitement, Dr. Ley observes, it is not difficult to trace an increased arterial action approaching to inflammation, and this being the first and immediate action of the remedy, we ought to reckon the subsidence or evanescence of these effects among the virtues of the medicine.

"We must present the concluding observations of this gentleman, as they have some bearing on the inquiry before us. 'Dr. Pereira,' he continues, 'is of the opinion that belladonna is not fitted for plethoric constitutions, nor for febrile and acute inflammatory cases, in which Mr. Ley coincides; but he thinks it may be rendered so by combination with other medicines, or by preceding its use by blood-letting. It has been his habit, he says, to produce the excitement, and to allow the reaction to go on undisturbed for a day or two. He expects more benefit on the second or third day of inaction, than from the immediate effect of the drug. In this way relief is experienced in scrofulous ophthalmia, in tooth-ache, etc., when the state of excitement has passed away. A decided astringent effect is produced by the exhibition of belladonna, in some chronic discharges from the mucous membranes, and the secretion in ulceration of the trachea is diminished, and the cough relieved by it; various vesicular eruptions on the skin are also removed by

it, and when the contents of the vesicle have become semi-purulent, the true skin ulcerated, the ulcer being deep and devoid of healthy granulations, the edges being under the influence of the creeping vesicle, a single grain of the extract of belladonna will annihilate the eruption, and the ulcer will immediately assume a healthy appearance. This influence is well exemplified by that affection of the finger, where the cuticle is raised by a semi-purulent fluid around the nail. The cuticle being removed, the circle will still be enlarged by the separation of fresh cuticle, and the denuded surface pours out a copious discharge. 'The effect of one dose of belladonna is to dry the denuded surface, so that the disease no longer exists; and this is effected with so much rapidity, as almost to seem like magic.'

"Mr. Ley quotes cases from Mr. Liston's practice in University College Hospital, in one of which 'minute doses of belladonna cured an attack of erysipelas in two or three days'; and, in the other, a case of small ulceration on the legs, aggravated by a scald, and attended by much inflammation, 'after the fever was subdued, the belladonna speedily effected a cure.' Mr. L. finds a 'scaly, black, tobacco-smelling extract the best.'

"To repeat: Guersant, in *Dic. des Sc. Méd.*, states, that belladonna in small doses acts on the nerves in a way nearly analogous to that of the narcotics in general; but, besides, it has a marked stimulating action on the sanguineo-capillary system in general, and the exhalant system in particular, a consequence of which is the abundant transpiration its employment induces, as shown by its favourable influence on ulcers, an increased secretion of saliva, of urine, and even of the menstrual flow, and of the alvine evacuations.

"In the *Amer. Journ. of Med. Sciences*, O. S., vol. xix, 260, from *Journal de Chim.*, it is stated, that Dr. Chiorinth prescribed ʒiii of the oxide of zinc for a mare poisoned by ʒss of the extract of belladonna. The nervous system was greatly affected, the animal being attacked with palpitation and difficulty of respiration.

"In the 45th volume of the *Lancet*, there is a very complete paper by Dr. R. S. Hutchinson, on the action of belladonna, in which he contends that its action is on the spinal marrow and its nerves, and the very reverse of that of strichnine. The latter is stimulant upon this system of nerves, whilst the former is sedative. He gives it internally for neuralgias, in doses of a grain, three times a day. A number of cases are detailed by this gentleman. For its application in neuralgia, we may allude, in passing, to the papers in Bayle's *Bibliothèque de Thérap.* vol. ii; also, to the remarkable power claimed for it by a number of observers in curing cancer and scirrhus. Lambergen, Marteau de Granvilliers, and others, employed the infusion of the leaves with success in a number of cases of cancer of the breast. He supposes that, 'elle avait eu la vertu d'amenir une suppuration louable dans un cancer ouvert, et de résoudre le restant de la tumeur squirrheuse de la mamelle.' From the testimony of this gentleman, it acted very decidedly in changing the condition of the urinary secretions. 'By a peculiar and specific virtue, not only attacking and destroying the cancerous poison (le miasme cancéreux), which it diminishes in the blood, and as it exists in the mammary glands, but even carries it out through the urinary passages, in the same way as mercury and other specifics act in other disorders through the several secretions.' [Bayle.]

In a review of Chapman's *Lectures on the more important Eruptive Fevers*, etc., in the University of Pennsylvania, in the *British and Foreign Med. Review* for April 1846, we gather the following:

"'Dr. Elliottson mentions that, for nearly two years, all the children admitted into a particular ward under his care were seized with scarlatina, in consequence of a patient with the disease having been in the ward at that remote period, and this in despite of whitewashings and other cleansings.'

"Dr. C., who paid much attention to the duration of the incubative periods in contagion, observes:

" ' That of scarlatina is said to be from five to six days. My own conviction is that it is usually greater, though I speak diffidently on the point, having been unable to satisfy myself in regard to it. Equally subjected, apparently, to infection, I have seen individuals break out with the disease from the third to the eleventh day ; and we have had some cases recently reported, where, in a family of eight, the interval varied from the seventeenth to the twenty-sixth day, the average being seventeen days.' (p. 135.)

" The reviewer adds—' The professor is inclined to allow some weight to various powerful evidence in favour of belladonna as a prophylactic.'

" ' Yet, (he pithily adds,) by the assurance of Hahnemann, the author of the homœopathic doctrines, which originating in fraud and imposture, and continued by the most atrocious wickedness, that he was equally successful in the infinitesimal dose of a few drops, daily, of a solution which contained no more than the millionth part of a grain of the extract, distrust, and even ridicule, are cast over the whole affair, and our faith must be withdrawn and suspended till fresh and better evidence is afforded.' (p. 151 of his work.)

" ' To aconite, one day is the time which should be allowed for completing its action ; to belladonna, from three to six days should be given. In robust and active persons, who perspire much, the action of belladonna will be extinct in the course of about three days ; in persons in different conditions, its action may continue for six or seven days.'

" Belladonna as a Preservative against Scarlatina—experience of Dr. Schenck—(*Journal de Hufeland*, 1812.) From Bayle's *Biblioth. de Thérap.*, 391. Schenck, in inviting inquiries into the peculiar nature of the prophylactic property of belladonna, adds :

" ' Cet object est digne de la plus grande attention, et mérite qu'on le soumette à des expériences suivies ; car, se laisser prévenir contre ce moyen par l'extrême petitesse de la dose, se serait oublier qu'il est ici question d'un effêt dynamique, c'est-à-dire, d'un effêt sur le vivant, et qu'on ne peut apprécier ni par livres ni par grains. Quel est celui qui a pu déterminer pondérativement l'arome, ou bien la quantité d'un virus nécessaire pour produire un effet quelconque ? Etendre une substance, est-ce donc constamment l'affaiblir ? Et le liquide qui l'étend ne peut-il pas devenir un véhicule qui développe en elle une propriété nouvelle, un nouveau mode d'action plus subtil que celui qu'elle possédait auparavant.'

" In the *Lancet*, vol. xlv, for 1843, a reviewer contends that the eruptions produced by belladonna and that in scarlet fever are not identical, and that the former may be entirely accidental. He does not, however, furnish any numbers.

" Dr. Elliotson, in his *Practice of Medicine*, does not furnish us with any original information, but cautions the reader against the placing of too much credence in the preventive powers of belladonna.

" Tweedie, in his *Library*, states that he has no personal experience with the article. He mentions his having produced ' pain and redness of the fauces, with an efflorescence on the skin of the throat', by the administration of a sixth of a grain of belladonna three times a-day. He advises the making of experiments to test the question.

" Among the accounts unfavourable to the use of this preventive remedy, is one by Dr. Lehmann, published in the 22nd volume of *Rust's Magazine*, an abstract of which may be found in the *Amer. Journal*, vol. i, 1827, p. 207.

" In this memoir, he observes, that an epidemic appeared at Torgau, in 1825, of so violent a character, that one in eight of those affected with it died ; among these, thirty patients, all of tender age, fell victims. The belladonna was administered with confidence in many families in which the disease appeared, and there could be no doubt of the good quality of the extract ; nevertheless, it did not act either as a preservative, nor mitigate the severity of the disease. Dr. L. ' did not perceive any difference either in the violence of the disease, or its results, when it attacked those who had taken

the belladonna even for a long time, and in large doses, and those who had never taken the medicine.'

" Barth states (*Diss. Inaug. de Belladon. Scarlat. præsid.* Leipsic: 1827), that at Stratsund, in a frightful epidemic which prevailed, the belladonna did not act as a preservative. Dr. Mierendorf was said to have observed, that those children who took it were made more sick, and died in larger numbers than those who did not have recourse to it. Dr. Schmidt lost two children who had taken the belladonna.

" From a review of vol. ii of *Trans. of Prov. Med. and Surg. Association*, in *Brit. and For. Med. Rev.*, Jan. 1840, we find, in reference to a communication of Dr. Otto, on the diseases of Copenhagen, that 'belladonna is no longer regarded as a prophylactic against scarlatina.'

" Dr. Jos. Frank, (*Rust's Mag.* Bd. 22,) Teffel and Wagner oppose the administration of belladonna as a prophylactic; the first, however, on grounds purely theoretical.

" Review of articles by Kennedy, Belluomini, and others, on Scarlatina, in volume xvii of *Brit. and For. Med. Review*, 1844, p. 217.

" 'The results obtained', says the reviewer, 'were singularly conflicting.' M. Gondelle, in *Rev. Méd.*, Janvier, Mars, et Avril 1843, has published an exceedingly prolix essay on scarlatina, in which he labours to prove that belladonna is a prophylactic, 'but that its action, unlike that of vaccination, which destroys the liability to small-pox, is confined to removing the susceptibility to scarlatina during the time that it is employed, and ceases on its use being discontinued. Should this statement be substantiated, it may, perhaps, be the case, that the narcotic power of the belladonna, and of the kindred remedy aconite, blunts for the time the susceptibility of the constitution. On this supposition we might account for some who have been exposed to the contagion not contracting the disease. We confess that M. Guersant's favourable opinion of the prophylactic virtue of belladonna makes us hesitate, the writer adds, in the expression of our disbelief in its power. Still, it should be borne in mind, that the liability to scarlatina is much less than to small-pox and measles, and that many persons pass through life without being affected by it; and that the general result of the more recent experiments with the drug, were so much less favourable than those which were at first obtained, that Hahnemann was compelled to admit its frequent failure, and to resort to the supposition of a change in the fever in order to explain the fact.[1] For these cases he suggested the use of aconite, in which he is followed by Belluomini, and the rest of his disciples.' The following is extracted from the work of the author last cited:

" 'Belladonna is only a preservative against smooth scarlatina, and therefore it remains without effect when the prevailing epidemic is merely miliary scarlatina. Against this, the preservative is aconite. Now, as these two epidemics reign almost always at present promiscuously, whenever prudence suggests the use of a preservative, aconite and belladonna should be administered alternately. The doses of these medicines ought to be the same as those indicated for the dose, but taken at long intervals, beginning with aconite, when miliary scarlatina is dreaded, and with belladonna, if it be smooth scarlatina, and continuing the use of these medicines alternately.'

" Scarlatina, the best authorities assert, is an 'increasing malady', and its ravages progressively augment. In order to show that it is not apt to appear and suddenly disappear, we quote from Dr. Gregory's recent work on *Eruptive Fevers*, p. 182. The infecting distance of the miasm has not been investigated; but it is found that when it invades a school, no precautions avail anything towards preventing the spread of the infection. This has often been proved at the London Foundling Hospital. At Ackworth, in 1813, the

[1] " Those who wish to obtain a brief summary of the various experiments on the prophylactic powers of belladonna, are pointed to Meissner's *Forschungen*, vol. iii, S. 302, and vi, S. 441."

contagion lingered in the school four months, in spite of every effort. With regard to the susceptibility of this complaint, Dr. Binns tells us that out of 216 scholars at Ackworth school, 184 were affected. Dr. Adams remarks, that this is a larger proportion than is commonly found susceptible in districts or families. Like all other miasms, that of scarlet fever is capable of attachment to fomites, especially clothes.

" From *Archives Gén. de Médecine*, Juin 1824, which contains the original paper by Ernest Martini, which we also observe in Bayle's *Biblioth. de Thérap.*, ii, we find a pretty detailed account of the history of the remedy. We will translate and condense from this paper. In 1818, from a careful examination into the nature of scarlatina, Dr. Berndt came to the conclusion, that it was a disease affecting the nerves principally; therefore, he thought, that whatever would excite the system might prove effectual as a prophylactic. Hence, the belladonna, recommended by Hahnemann in 1807, suggested itself to him, and he resolved to verify the opinions touching its efficacy. In order to obtain certain results, he employed the remedy upon individuals directly exposed to the contagion, and particularly on infants under five years of age, who are, it is well known, more apt to contract the disease. The doses used by Hahnemann seeming too minute, Dr. Berndt employed the following mixture :—℞ Extract belladon rec. parat. grs. ij, aquæ cinnamon. vinosæ unc. j, giving to children under one year three drops of this solution morning and evening; three or four drops was given to those over two years of age, increasing the doses in the same proportion, according to the ages. Having used this treatment for a month or more, during the continuance of an epidemic, he had the satisfaction of observing that of 195 children exposed daily to the contagion, and to whom he administered the extract, there were but fourteen who, notwithstanding the use of the preventative, took the disease; 181 continued exempt. The small proportion affected had the disease very mildly. Other experiments, made with three grains of the extract, given to a large number of persons exposed to the epidemic, were attended with the same happy results.

" In the London *Lancet*, p. 135, vol. xvi, we have, from *Hufeland's Journal*, some of the general deductions on the prophylactic powers of belladonna. Hufeland was led, both from his own experience, and that of a great many other practitioners, to form such a favourable opinion with respect to the powers of this medicine, that he is convinced that in epidemics of scarlet fever it ought universally to be resorted to, as the best means of preventing the disease altogether, or mitigating its violence. Among the conclusions are the following :—

" 1. The proper use of belladonna has, in most cases, prevented infection, even in those instances where, by the continual intercourse with patients labouring under scarlet fever, the predisposition towards it was greatly increased. 2. Numerous observations have shown that, by the general use of belladonna, epidemics of scarlet fever have actually been arrested. 3. In those few instances where the use of belladonna was insufficient to prevent infection, the disease has invariably been slight. 4. There are exceptions to above three points, but their number is extremely small.

" The Journal adds, that 'it seems that in some epidemics, belladonna has no protective powers at all; the individual disposition, the method of using the remedy, and the quality of it, will, of course, have considerable influence on the result of the experiment.' The fresh extract is advised. *(Liter. Ann. der ges. Heilk.)* Effects of belladonna in preventing the contagion of scarlatina. From *Archives Gén. de Méd.*, Juin 1824, et *Journ. Comp. J.*, 1824, xviii, 369. See also *Edinburgh Journal*, January 1825.

" The discovery was made by Hahnemann[1] of Leipsic, in 1807, but he did not commence applying it till ten years afterwards.

[1] The parent of homœopathy; and a mystic long before he became an insensate quack.

" Berndt, who, as we before observed, was the first to make a connected series of experiments, says, 'that in the epidemics of scarlet fever, which prevailed throughout the city in 1818-19, he used the belladonna as a preventive in children under sixteen years of age, freely and continuously exposed to the contagion. Of 119 cases, 14 only were affected'; and he adds, 'that afterwards, when he used a stronger preparation, every one escaped the disease.'

" Dr. Behr of Bernberg, states, that of forty-seven individuals who took the belladonna as a preventive, six only were attacked with the disease. Koreff, a professor at Berlin, affirms, from a very extensive and long-continued experience, that the most intimate intercourse may be kept up with patients affected with scarlet fever, provided the belladonna be taken in the proper dose for eight or nine days before exposure, and be continued till the period of desquamation.

" Other statements to the same effect have been accumulated in the memoirs alluded to, so that there is no want of authorities for the facts. The quantity given has generally been small. Even if the belladonna does not act as a preservative, 'it is supposed by this writer that the disease is never fatal in those taking it.'

" From *Rust's Magazine*, in *Edinburgh Journal*, 1826. Dr. Randhahn, of the Orphan Hospital of Langladorf, in Prussia, testifies, 'that in one of the apartments of the hospital, two children were attacked with scarlet fever in February 1825, and one hundred and sixty others were exposed to it. A solution of three grains of the extract in one ounce of vinous infusion of cinnamon, was given to each in small doses during the whole month of February. Up to the 21st of April, when the report was made, not a single case had occurred; and even two, who lived in the same chamber with those affected, did not suffer.'

" From *Hufeland's Journal*, in *Edinburgh Journal*, 1826, 242. Hufeland says :—'It gives him great joy to be able to confirm, by the results of fresh experience, the efficacy of belladonna, as a preventive against scarlatina. Five years have now elapsed since, in his Journal, the request was, for the first time, made to employ the belladonna with this view, and since that time, every year has brought fresh proofs of its power.'

" Dr. Kuntsmann of Berlin, employed the belladonna in every family in which he had an opportunity; in fact, in several instances, and with only one exception, always with success. In this case, as he afterwards found, the medicine had not been properly used. But as we see the scarlet fever only attacking certain members of a family, and sometimes leaving whole families unattacked, some doubts still remained in his mind about the efficacy of the medicine as a preventive of the disease. In January, however, of the year, a case occurred in his practice which, he said, tells very strongly for the alleged power of the belladonna. In an institution, of which he had direction, there were about seventy children of both sexes, from four to fourteen years of age. On the 25th of December, last year, the son of the director was attacked, and before Dr. R. was informed, two girls also, of four and seven years of age. He now separated the sick from the healthy as much as possible. Twelve drops of the mixture was the largest quantity administered. The disease afterwards made its appearance in no individual case until the 23rd of January, four weeks afterwards, when one boy was taken; the case was of a very mild nature. 'The second son of the director, who took no belladonna, was attacked with the scarlet fever in a very high degree.' 'The children took the medicine six weeks in succession, and he never saw any bad effects from its continuance.'

" Hufeland attributes the efficacy of belladonna to its power of diminishing nervous susceptibility, without which one cannot take the disease. (*Gaz. de Santé*, Mars 1826.) No one knows the nature, the cause, or the kind of perturbation which follows its administration; but to this perturbation Martini also

ascribes its preservative power. (*Rev. Méd.*, ii, 371.) M. Ibrélisle, physician at Metz, preserved twelve children from scarlatina with the belladonna, when the disease had attacked two hundred and six in the midst of whom they lived. (*Bull. de la Soc. d'Emulat.*, 1823, 201.) Dr. Velsen gave the plant to two hundred and forty-seven persons, of whom only thirteen took scarlatina. He gave two grains of the extract, dissolved in two ounces of water and two drachms of alcohol, of which fifteen to twenty drops were taken during the day. The inhabitants of entire villages in Germany, upon using belladonna, remained exempt, when the scarlet fever was in neighbouring ones. All the papers on the subject of the efficacy of the medicine as a preservative, were collected by Hufeland, in 1826, into one volume.[1] A few physicians, among whom we may mention Schwartze, did not coincide in the belief of this power in belladonna. (M. and De Lens, *cit. sup.*) Koreff, note communiquée à M. la Professeur Laennec, sur l'emploi de belladon. contre la contagion de la scarlatine. (*Bull. des Soc. Méd.*, i, 374.)

"Bayle, in 1830, published a notice favourable to the use of belladonna, by which it seemed that of 2027 individuals, in all, to whom it was administered, 1948 were preserved from scarlet fever, and 79 were attacked with it.

"Dusterborg, by means of belladonna administered for two weeks, preserved from scarlet fever all those who took the medicine. 'In order to ascertain the real value of the remedy, he purposely omitted to administer it to one child in every family; and this child alone, according to his report, was taken with the disease. He adds, however, that scarlet fever occasionally seized a child who had not been taking the remedy for three or four days, but it was, always, under these circumstances, mild, and often only manifested its presence by desquamation.'

"Zeuch, physician of the hospital for children in the Tyrol, after eighty-four children were attacked with scarlet fever, was induced to try the prophylactic effects of belladonna on the remaining sixty-seven. With a single exception, all were preserved from its attacks, though the disease was raging around.

"From Bayle, vol. ii, 508, we extract the RESULTS OF THE EXPERIENCE OF A NUMBER OF OBSERVERS.

	Took the Belladonna.	Preserved from Scarlet Fever.	Attacked.
Schenck	525	522	3
Rhodius	7	7	—
Massius	5	5	—
Gumpert	84	82	2
Berndt	195	181	14
Behr	47	41	6
Kohler	7	6	1
Wolf	132	126	6
Schenck	3	3	—
Benedik	10	10	—
Zeuch	61	60	1
Kuntsmann	70	60	1
Genecki	94	76	8
Maisier	170	170	—
	70	66	4
	300	280	20
Velsen	247	230	13
Total	2027	1948	79

"The *Edinburgh Journal*, vol. lx, p. 497, contains an abstract of an article from the *Bull. de l'Acad. Royale de Méd.*, 1843, by M. Stievenart.

[1] "La Vertu Préservative de la Belladonna contre la Scarlatine, pp. 226. Berlin: 1826."

"The circumstances rendered any trial of this kind of double value, as, on account of the fatality of the epidemic, 30 patients had already died out of 96 seized. In a small village of 250 individuals, 200 took the belladonna and were all preserved from the attacks of scarlet fever. Of the 50 others, 14 were seized, and 4 died. At the village of Curzies, the same gentleman, Dr. Stievenart, administered the belladonna to the children at the public school, and allowed them to continue at their lessons, and have communication with the other children of the village : 'all to whom the belladonna was administered escaped the scarlet fever, but a few who refused to take it were seized with the disease'. Dr. S. employed two grains of the recent alcoholic extract, dissolved in one ounce of aromatic infusion ; two drops being given daily to a child one year old, or he gave one-tenth of a grain of the powder of the root twice a day. He generally continued it some ten or fifteen days. The small doses never produced a toxicological effect. In five or six cases, he observed a rash like measles. 'He thinks fifteen days sufficient to put the system under the influence of the preservative power of the remedy, but he recommends a recurrence to it if the epidemic returns, or breaks out with renewed violence.'

"Observations by Massius, Professor of Medicine at Rostock. (*Biblioth. Méd.*, xlvii, 260.) From Bayle's *Biblioth. de Thérap.*, ii, 394, we find that he relies from his own experience in the efficacy of belladonna as a prophylactic. In this he is sustained by Dr. Gumpert of Posen (see also *loc. cit.*), Maisier, of Magdebourg, and Velsen.

"From the supplementary volume, 1846, to Mérat and De Len's *Dict. de Mat. Méd.*, additional evidence is afforded us. Dr. Sazinot reports that of sixteen children to whom he administered belladonna as a preventive, twelve remained entirely exempt, although they were exposed to the contagion. Four of them had no eruption, but suffered from slight sore throat. (From *London Medical and Phys. Journal*, vi, 361, N.S.) Dr. Hillem-Kamp, during an epidemic of scarlet fever, prescribed the solution of the extract of belladonna to one hundred and five children, of from one to six years old; of this number, one half took the remedy regularly—twenty to thirty used it irregularly—from twenty to thirty did not take it at all. Of the first, five only had scarlatina; of the second, eight took the disease ; and of the last, eleven ; but of those who had taken the belladonna, none died. This gentleman used a solution of two grains of the extract in one ounce of water, giving morning and evening as many drops as the child had years. (*Journal de Hufeland*, Mars 1832.)

"From a review of Dr. Oppenheim's work on the *State of Medicine in Turkey*, in *British and Foreign Med. Rev.*, Oct. 1837, 393, we have the following statement of what is regarded as a 'marked instance of the prophylactic powers of belladonna in scarlatina', used on a large scale. 'The disease had also broken out among the troops in Monastir, where no separation of the healthy from the unhealthy was practicable; several soldiers had been carried off, and the disease had even snatched a victim from the Grand Visir's harem. The Visir, who loved his troops as his children, became alarmed, when I thought it my duty to make him acquainted with our preventive measures. He issued an order to his soldiers to take carefully a medicine that would be prepared for them; and as he set the example by taking it himself from the hands of his physician, they obeyed with less reluctance. As I had to fear that the counting of the drops would not be well attended to, I preferred the form of pills, in spite of the opposition of the apothecaries, who for a whole week were engaged in nothing else than in making pills, although only two battalions (1200 men) of regular troops were in the town. I directed one pound of extract of liquorice to be mixed with thirty-six grains of extract of belladonna, and the mass to be made into two-grain pills, of which each soldier was to take five, morning and evening. I entertained the hope that this dose, though smaller than usually prescribed,

would have the desired effect with men who had never taken any medicine, and who were all between the ages of fifteen and twenty-five; and the result answered my expectation; for, although the epidemic continued to rage in the city, and the soldiers were quartered on the Christian and Jewish part of the population, only twelve of all that had taken the belladonna fell sick, of which, however, one half died. In ten days previous to the administering of the medicine, more than forty cases of sickness had been entered on the sick list.'

"The London *Lancet*, vol. xxix, 1838, mentions, in a review of Professor Fleischman's *Practical Observations*, that the extract of belladonna (two grains to one ounce of distilled water) was given to fifty-two children, of from six to fourteen years of age. Each patient took, morning and evening, as many drops of the solution as he counted years, and this dose was in some instances increased. The remedy was thus administered during five weeks —the duration of the epidemic. Of the fifty-two individuals, forty-eight remained free from any attack, and four were affected with the disease. In two families, where the children commenced taking the remedy immediately on the disease attacking one of the family, all the children remained free from contagion, although they were in constant communication with the affected individual during the whole course of the disease. In twenty-three cases, Dr. F. remarked some of the ordinary symptoms of the action of the belladonna a few days after its use. Three were covered with miliary vesicles. Some of the conclusions drawn by this writer are, that it either counteracts the contagiousness of scarlatina, or that it diminishes the susceptibility to it—and that, when the disease does occur during its use, its character is much more mild.

"From Pereira, we learn that Bayle (*Bib. de Thérap.*, ii, 504), before alluded to, has collected from various publications 2027 cases of persons who took this medicine and were exposed to the contagion; of these 1948 escaped. Oppenheim (*Lond. Med. Gaz.*, xiii, 814) gave it to 1200 soldiers, and only twelve became affected. To these may be added Hufeland (*Lancet*, May 2, 1829) and Koreff (*Lond. Med. Gaz.*, iv, 297), who admit, from their own personal observations, the efficacy of the remedy, though they have not specified the number of cases in which they have tried it. But bearing in mind, Dr. P. adds, 'the well known capriciousness of scarlet fever in regard to the subjects of its attacks, and the large number of those who, though exposed to its influence, escape, the best evidence hitherto adduced in favour of the notion must be admitted to be inconclusive. While, therefore, the facts brought forward,' he continues, 'in favour of the existence of this prophylactic power are only negative, those which can be adduced against it are positive; for I conceive twenty cases of failure are more conclusive against the opinion here referred to, than one thousand of non-occurrence are in favour of it. Now Lehmann (see Bayle, *loc. cit. sup.*); Barth (*ibid.*); Wendt (Rust's and Casper's *Krit. Repert.*, xxii, 115); Muhrbeck (*Rust's Mag.*, xxiv, 485); Hoffmann (*ibid.*, xxv, s. 115); Bock (*ibid.*, s. 80); and many others that I could refer to, declare that it has failed in their hands to evince its prophylactic powers.' In this country, Dr. Pereira states, that we have no extended series of observations to quote; but the cases which he is acquainted with are decidedly against the efficacy of the remedy. A remarkable failure is mentioned by Dr. Sigmond (*Lancet*, 1836, '37, vol. ii, 78), of a family of eleven persons who took the supposed specific, yet every individual contracted the disease.

"Dr. Watson, in his *Practice of Physic.*, p. 1025, professes to have had no experience with belladonna as a prophylactic, though he advises the reader to give it a fair trial.

"The American editor of Watson, Dr. Condie, after noticing some of the arguments in its favour, says: 'We have ourselves given the belladonna to a number of children, on several occasions when the scarlet fever was prevailing epidemically, with a view of testing its prophylactic powers; but

although redness and dryness of the throat, and a diffuse scarlet efflorescence was produced by it, yet, in the majority of cases, we never found it in any instance to exhibit the slightest influence in shielding those who took it from an attack of the disease, or in mitigating in any degree its severity. In one case, the efflorescence produced by the belladonna was kept up for forty-eight hours; in a week afterwards, the child was attacked by the fever in the most virulent form, and died on the fourth day.' Dr. C. admits, however, that the testimony adduced by Steivenart is very strong in its favour, and that if the experiments, which were on an extended scale, were correctly stated and carefully made, 'they would go far to prove that belladonna *does* actually possess the property of shielding the constitution from an attack of scarlet fever.' We have already cited these experiments of Dr. S., which we obtained from another source.

"Dr. T. D. Mitchell, in his *Thérap.* and *Mat. Medica*, published in 1850, professes himself a believer in the prophylactic power of the article under consideration. The causes of failure he ascribes to using an inert article. He also cites Dr. Newbigging, 'who has recently tested the preventive powers of belladonna in a public institution', where seclusion had failed to arrest the spread of the disease; he gave the extract in doses of a sixth of a grain with marked success. (*Edinb. Monthly Journal*, Sept. 1849.)

"In Valenciennes, in 1846, four hundred children, we are told, were treated with belladonna to save them from scarlatina, then prevailing as an epidemic in the vicinity. All escaped, although only six had any efflorescence, and in one hundred and forty-five there was no apparent local manifestation of any kind.

"Dr. Mitchell, after alluding to the American testimony contained in Bell's *Bull. of the Med. Sciences* for February 1846, continues: 'And I add that I have employed the extract with such decidedly *preventive* efficacy, that it would be folly or madness to doubt. Again and again have I applied the aromatic solution, and have not only gained the desired result, so far as the *prevention* was concerned, but have allayed the perturbation of nervous mothers by exciting their confidence, and enlisting their fixed attention to its careful administration. This alone is worth all the trouble of the prescription.'

"Dr. Meigs, in his work on *Diseases of Children*, confesses to have had no experience, yet he admits the force of testimony adduced by others.

"Cazenave, p. 58 of his work on *Diseases of the Skin*, mentions that 'M. Biett saw the disease reign epidemically in one of the lofty valleys of Switzerland, and respect, almost without exception, children to whom the belladonna had been administered.'

"In the last volume (iii) of the *Trans. of the American Medical Association*, the Chairman of the Committee on Practical Medicine and Epidemics, Dr. J. K. Mitchell, observes as follows. As it is so pertinent, we will extract it entire. 'Too little attention has been paid to the subject of the prophylaxis of belladonna against the inroads of scarlatina. A careful examination of the recorded evidence, shows that no professional point rests upon higher proof than this. One of the committee having been impressed by the force of the evidence, endeavoured to put it to the test of a prolonged and varied experiment, with results of the most variable character. It is true that either scarlatina, or some disease very like to it, is often far from being readily propagated by contagion, whilst at other times it is rapidly disseminated from person to person. This fact renders very difficult a satisfactory solution of this question; but it may not be amiss to say, that with one failure out of thirteen experiments made in several different years, scarlatina has been apparently divested of its contagious power when treated by belladonna. In the last experiment, recently made, one of eight children in a single family was attacked with severe, well marked scarlatina. The other children, being immediately placed under the use of belladonna, were per-

mitted to have constant access to the apartment of the one attacked. All of them escaped the disease. Without segregation, so far as the subject has been examined, with but one exception, the unprotected have been thus preserved from the disease. The greatest difficulty lies in the scarcity of good extract of belladonna. But this may be obviated so soon as the demand will justify experiments for its better preservation. The best formulary is that which holds the alcoholic extract in solution in camphor water, and of this a quarter of a grain a day may be administered to a child of three years of age. These suggestions are made chiefly with a view to attract the attention of rural physicians to an experiment, which may be best examined in the very limited localities in which they reside.'

"From the report on Practical Medicine, by Dr. Austin Flint, in the forthcoming volume of the *Trans. of the American Medical Association*, the reporter states: 'Of the value of *belladonna* as a prophylactic agent in this disease (scarlatina), a member of the committee, Dr. R. Haymond, of Brookville, Indiana, expresses, in a letter to the chairman of the committee, strong testimony, based on a large opportunity for observation. He states that, for the last ten or twelve years, his attention has been directed to this subject; and that, during this period, he must have administered this remedy, for that end, in between two and three hundred cases. Of the whole number, but *two* have ever contracted the disease, and in both these cases, the disease was mild and easily managed. In both instances, the eruption varied from the usual appearance, the red points being larger and more distinct, resembling somewhat the eruption of measles.'

"In an article in the *Southern Jour. Medicine and Pharmacy*, vol. i, No. 1, we find an article by John S. Erwin, M.D., entitled 'A Short Sketch of Scarlatina', from observations made during the epidemic of 1843, in Buncome Co., N. C. From the way in which it made its appearance, Dr. E. was led to the opinion that it spread independently of communication. He says that the statement of Dr. Green, that those who 'have taken the medicine generally escape the disease altogether, or, if they do become affected, have it in the mildest possible form', agrees precisely with what he knew to be facts. 'During the prevalence of the epidemic, Dr. Hardy gave notice that he would prepare the belladonna for all who wished to try the experiment. Anxiety, of course, led many parents to avail themselves of this their only hope; he followed the original mode of prescription, dissolving three grains of the extract in one ounce of cinnamon water, and directing two or three drops, morning and evening, to a child under one year old, and one drop for every year above that age. He and myself kept an account of two hundred and fifty children, who took it thus; and of that number, less than half a dozen had the disease, and they had it very mildly. After eight or ten days' use of the medicine, there was an eruption over most of the surface, in some cases profuse and troublesome from itching. Those families which did not take the preparation, had the disease with scarce an exception. I recollect a remarkable incident that occurred in a particular neighbourhood. A poor woman, with a family of sixteen children, used it carefully according to directions, and it is notorious that her family alone escaped, when hundreds were attacked. Many other striking cases might be enumerated to prove its efficacy, both there and elsewhere; but, to avoid prolixity, they must be omitted. Dr. McKee, in the extension of the same epidemic, exhibited the belladonna with the same astonishing powers of prevention. These facts coming under my own observation, I cannot but believe it to be almost an infallible prophylactic when properly used.'

"The result of our inquiries among some of the medical gentlemen in this city, is as follows. We may add, that few had the opportunity of making accurate observations. Dr. S. H. Dickson has not found it effectual in preventing the appearance of scarlet fever, though he has not given it an extensive trial. Dr. E. Geddings, also, is not disposed to put much faith in it.

Drs. Moultrie and Prioleau have seen no particular effects. Dr. H. R. Frost informs us that he has recently been administering it to forty or more persons, and he is impressed with its beneficial influences. Drs. Lebby and Robertson, from a comparatively limited experience with its use, are inclined to rely upon it. Dr. Cain has used it in a number of cases, and he thinks very favourably of it; he saw but one instance when a child with the eruption of belladonna took the disease, and that in a modified form, and it recovered. His own child had a very thick rash on the face from taking the belladonna. Dr. Ogier, though he cannot furnish the numbers, has experienced such benefit from its use that he confides in its prophylactic powers. Dr. De Saussure has tried it on a few occasions, and thinks favourably of it. We have ourselves administered the belladonna to several persons; none of these, though exposed to the disease, suffered from it. We did not notice the scarlet efflorescence.

"From the *Minute Book* of the Charlestown Orphan House, we find, from the physician's annual report for the year 1838, that a 'frightful epidemic of scarlet fever' prevailed. There were 136 inmates, including 114 children, 12 officers, and 10 servants; of the first, 67 had the disease. Through the kindness of Dr. George Logan, the attending physician, and of Mr. Campbell, the superintendent of the house, we are enabled to make the following abstracts. We gather from the symptoms related, that the disease showed itself in by no means a mild form; yet of the 67 who suffered from it, only one died. 'The progress of the disease was here arrested, and more than two months have elapsed since its entire disappearance. That almost fifty inmates of the house, generally alike predisposed in constitution, and alike exposed to contagion in its active stages, should have escaped, is indeed a pathological fact worthy of record, which neither the admission of accident nor idiosyncracy can explain. Was it attributable to a returning salubrity of the locality? or shall we venture to ascribe it to the persevering exhibition of belladonna, which was carefully administered for three weeks, morning and evening, in accordance with the views of Dr. Hahnemann, of Leipsic, and also of Dr. Koreff, of Berlin, who employed it with extraordinary success as a prophylactic.' Dr. L. remarks upon the similarity between the effects produced by belladonna, and those by the administration of arsenic.

"In reviewing the testimony afforded by the preceding facts, our opinions, if we are allowed to express them, are decidedly in favour of the prophylactic power of belladonna. However some may consider the evidence of a negative character, and therefore unworthy of confidence, yet, from its cumulation, from the careful way in which some observers conducted their inquiries, and from the possibility of failures[1] being owing to the use of an inferior or badly prepared drug, we cannot but conceive that to discard it as utterly indecisive, would be indulging a spirit of irrational incredulity, leading to the rejection of any amount of merely presumptive proof. But assuredly under circumstances like these, granting that the efficacy of the means is only problematical, none should hesitate to employ measures so simple in their application, and so safe in their consequences. The failure to avail ourselves of the prophylactic influences of belladonna, we cannot now but regard as a violation of those sacred obligations, which force us to leave nothing untried which *may* contribute so largely to the mitigation, or eradication, of one of the severest inflictions of the hand of God.

"After carefully considering the nature of the action of belladonna, and the nature and course of, and the pathological phenomena accompanying scarlatina, in order to endeavour to ascertain what relations there may be between the administration of the one, and the existence, or non-existence of the other, we draw the following conclusions:

"Belladonna, in the comparatively small doses used, may not, it is true,

[1] Frequently, we suspect, to inadequacy of the dose. Ed. Lond. J. of Med.

have the same toxicological effects that larger quantities produce, yet, either in large, or in continued small doses, we find that it acts, first, on the external cutaneous surface, stimulating the sanguineous capillaries in general and the exhalants in particular, as shown by the scarlet efflorescence, and by the more copious discharge from ulcers; 2nd, on the internal mucous membranes, producing dryness, heat, and swelling of the throat and fauces; and, 3rd, on the nerves, affecting the entire cerebro-spinal system with its ramifications, inducing delirium, dilatation of pupil, relaxation of muscular fibres generally, a kind of narcotism, and, finally, death.

"All of these it may, and probably does, reach, by being received into the blood.

"Now in scarlatina, whatever be its true nature, we find the onus of the disease resting upon these very organs, and influencing these very functions, which we observe most liable to be affected by the belladonna. We need not cite the usual and well-known train of symptoms so characteristic of the disease.

"May not, then, the prophylactic power of the drug, gradually introduced, depend upon an antagonism going on. The influences induced by it gradually modifying the condition of the organisms and their functions, may weaken or destroy the noxious agent—or, the general nervous erythism in which the system is thrown, may render it insusceptible to the incursion of the epidemic, which seeks for its seat, as we remarked, precisely those localities pre-occupied by the drug, supposing it to have been previously administered.

"Moreover, in scarlatina, from the disturbance to the healthy play of affinities throughout the entire system, renal derangements are of frequent occurrence, and our therapeutic resources are consequently directed to this important secretion. Belladonna, from the observation of those who employed it for cancerous affection, as well as for the prevention of scarlatina, is shown to produce a very decided determination towards, or free secretion from, this great emunctory. May not this also be one of the channels through which it exerts so beneficial an influence? So powerful was the effect produced upon the kidneys and bladder, that to this some of the early writers attributed its ability to cleanse and purify the blood, and hence to eradicate the cancerous diathesis.

"In a word, belladonna, by its obvious action on the several parts of the body, or on its functions, may so impregnate, or produce such a condition or *status* of them, as materially to modify, neutralize, or destroy, the noxious influences of a virus or miasm (scarlatina), which is about to seize upon, multiply itself, or be absorbed, in the same parts, or act upon the same functions of the system."

TRICHIASIS OF THE URINARY PASSAGES; PILIMICTION.

M. Rayer has published an elaborate article on the above subject, in the *Gazette Médicale* for August 2, 9, and 16, 1851. He had never seen a case in which hairs were passed in the urine, until a child, in whom this occurred, was sent to him by Dr. Paulin.

Hippocrates is supposed by some to refer to urinary trichiasis in the following words. "When thick urine contains small pieces of fleshy substance, or hair-like matters, it is from the kidneys that these are furnished."[1] This is Galen's reading, in his commentary; and M. Rayer thinks it likely that he had seen both flesh-like substances (clots) and hair-like filaments, excreted with the urine; but that Hippocrates speaks of but one thing—*small hair-like fleshy substances.* Celsus, in speaking of *carunculæ quædam*

[1] Ὁκοσοισιν ἐν τῳ οὐρῳ παχει ἐοντι σαρκία μικρὰ, ἢ ὥσπερ τρίχες ξυνεξέρχονται, τουτέοισιν ἀπὸ τῶν νεφρῶν ἐκκρίνεται.

exiguæ quasi capilli in the urine (*Lib.* ii, *Lect.* 7), very probably refers to filaments of fibrin : and the same remark may be made with regard to the Arabian writers. Altogether, the old authors speak often enough of substances *like hair* passed with the urine ; but there is no distinct reference to true hairs.

M. Rayer examines the subject under the following heads.

I. Hairs in the kidneys, or rather in the pelvis :—in the ureters ?

II. Hairs found in the bladder, and developed in the urinary passages.

III. Hairs found in the bladder or passed with the urine, proceeding from tumours which have opened into the bladder.

IV. Hairs in the prostate, or the urethral canal.

V. Hairs in urine, containing also mucus, blood, pus, or other foreign matters.

VI. Hairs in the urine of persons who have uric acid, gravel, or calculi.

VII. Hairs encrusted with phosphate of lime and phosphate of magnesia, and sometimes with a certain proportion of uric acid (*gravelle pileuse* of Magendie) : also hairs serving as the nuclei of phosphatic and other calculi.

VIII. Hairs in the urine ; gravelly matter of uncertain nature : purulent urine.

XI. Hair-like filaments, and hairs of animals found in the urine, sediments, gravel, or calculi, and mistaken for human hairs.

I. Hairs in the Pelvis of the Kidney, or in the Uterus. M. Rayer has, with others, sometimes found fibrinous filaments in the ureters, formed of blood from the kidneys ; and he thinks that the remarks of Hippocrates and Galen may apply to these. Bichat alone enunciates the fact, that hairs sometimes grow from mucous surfaces, as the stomach, intestines, or bladder : but he does not bring forward sufficient proof, although it is rather difficult to believe that so accurate an observer should have been deceived. There is no case to prove the formation of true hairs in the ureters.

II. Hairs developed in the Urinary Passages, and found in the Bladder. J. F. Meckel says that the bladder is sometimes bristled with hairs (*herissée de poils*) ; but this is rather a presumption deduced from pilimiction than an anatomical fact. Hoffmann, in the *Ephem. Natur. Curios.*, centaine v and vi, observ. 45, relates the case of a child, aged 6 years, who had strangury and tenesmus, with dysuria, and emission of hairs. It died ; and two calculi were found in the bladder, as well as fine hairs, straight or rolled up, scattered here and there. M. Maillet, as well as M. Rayer, have seen hairs in the stomach of the horse ; but have not been able to find them in the human stomach, nor in the urinary organs. The latter point, however, requires further investigation.

III. Hairs found in the Bladder or passed with the Urine, and furnished by Tumours opening into the Bladder. Hairs have sometimes been found, either free or attached to portions of membrane, in the bladders of women who have, during life, presented a tumour of greater or less size in the neighbourhood of one of the ovaries. After death, it has been ascertained that the cyst has opened into the bladder, with the walls of which it had become intimately adherent. It will hence be readily understood, that the pilimiction which some of these patients have presented during life is altogether distinct from true trichiasis, or growth of hairs in the urinary passages.

Several cases of this kind have been collected by M. Rayer, from various sources.

Dr. Amos Hamelin, of Durham, New York, related the case of a woman, aged 24 years, who was delivered at full term of a dead infant. Six days after, she was attacked with puerperal fever, and died on the twenty-second day. On *post-mortem* examination, a tumour, as large as a hen's egg, was found near the right ovary. It was adherent to the bladder, into which

there projected from the tumour a large bunch of hairs, which were from four to twelve inches long. The tumour contained osseous matter, and a small quantity of cerebriform substance.[1]

M. Delpech relates the case of a pregnant woman, who passed hairs with her urine ; and this state continued after she was delivered. Suspecting that there was a calculus in the bladder, M. Delpech incised the urethra, and removed a small calculus with several bunches of hairs. Two months after, the patient was again seized with pain, and again passed hairs. The bladder was again examined, and from it was removed a substance as large as an egg, having at one end a piece of membrane in which were implanted hairs, and enclosing a piece of bone like a zygomatic apophysis. The piece of bone contained a molar tooth, like that of a child five or six years old.[2]

Dr. Edward Philips, of Andover, relates the case of a woman, 30 years old, who had had dysuria from her youth. At 28 years of age, she had inflammation of the bladder, which was treated by antiphlogistics. A tumour was felt, extending from the lower surface of the liver towards the umbilicus. The patient died after having had symptoms of peritonitis. An encysted tumour was found in the right ovary, containing a creamy matter, and a tuft of hairs ; and the same substances were found in the bladder. At the inferior and posterior part of the latter organ, there was a cyst filled with creamy matter and hair, and also containing an incisor tooth, implanted in a piece of bone resembling an alveolus. The specimen is preserved in the Museum of the Royal College of Surgeons of England.[3]

M. De la Rivière, junior, gives an account of a woman, aged 58, who complained of pain in the hypogastric region, with dysuria. Catheterism was followed by an abundant evacuation of pus, which gave some relief. The symptoms returned ; she had purulent urine, vomiting, and diarrhœa ; and died. The bladder was adherent to the uterus : it contained some pieces of bone, and a roll of interlaced hairs, with purulent matter.[4]

M. Hippolyte Larrey gives the case of a woman, 33 years old, who, after three pregnancies, presented symptoms of which the following is a summary : a tumour as large as an egg in the left iliac region ; abscess in the hypogastrium, followed by fistula, from which proceeded pus, hairs, and urine ; emission of hairs with the urine ; a calculus, with hairs as its nucleus. A hairy tumour and a calculus were removed, and she recovered.[5]

A case evidently analogous to the preceding is recorded by Schenck, in his *Obs. Med.*, lib. iii, *De Urinis*, ob. 24, p. 486, as having occurred in an Apulian woman in the year 1573.

In several cases also, where the *débris* of a fœtus have been passed through the rectum and bladder, it is very probable that there were hairs.

iv. Hairs in the Urethra, and in the Prostatic and Seminal Ducts. No true case of this kind has probably been observed ; but fibrinous or purulent filaments have doubtless been mistaken for hairs.

v. Hairs in the Urine, which at the same time contains Mucus, Blood, Pus, or other Foreign Animal Matters. Cases of this nature have been recorded by Tulpius, Fabricius Hildanus, Spielenberger, and Zacutus Lusitanicus ; but M. Rayer suspects that the hairs were introduced from without. In two of the cases, they much resembled hog's bristles ; and, in Spielenberger's case, they were of the same colours and size as those

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[1] Extracted from the correspondence of Dr. Valentin, in the *Bulletin de l'Ecole et de la Société de Médecine*, 1808, No. 4, p. 58.

[2] Communicated by M. Boyer to the Acad. Royale de Médecin. *Rev. Méd. Française et Etrangère, et Journ. des Clin.*, 1827, t. iv, p. 487. Reported more fully by M. Delpech in his *Chirurg. Clin. de Montpellier*. Paris : 1828.

[3] Medico-Chirurgical Transactions, vol. ix, 1818.

[4] Related in *Journal de Médecine, Chirurgie, et Pharmacie, etc.*, tome x, p. 516.

[5] In *Memoires de l'Acad. de Médecine*, t. xii.

of the lap-dog belonging to the lady who passed them. The *Gazette Médicale* for 1851, p. 192, contains a case of cystic trichiasis, by M. Kræmer, occurring in a man 42 years of age. The hairs were finer than those of the head ; and were not those of the pubic region.

VI. HAIRS IN THE URINE OF THE SUBJECTS OF URIC ACID GRAVEL OR CALCULI. M. Rayer remarks, with regard to Dr. Golding Bird's observation that crystals of uric acid are often formed round a hair, that it is more likely that the hairs have been accidentally mixed with the urine, than that they have been passed with it.

M. Rayer relates the case of a boy ten years old, who was sent to him by M. Paulin. The child had been accustomed to a tonic and highly nitrogenised diet from infancy. Small hairs, and fragments of hair, which could not be easily accounted for, were passed in the urine ; and the sediment contained groups of microscopic uric acid crystals.

Dr. William Henry has recorded the case of an old gentleman who passed hairs, with uric acid gravel. No details are given of the treatment or the termination of the case.[1]

M. Rayer also refers to the case communicated by Mr. Paget, of Leicester, to the Medico-Chirurgical Society[2] last year, in which the urachus remained open, and a ring-shaped calculus, formed on a hair in the bladder, was extracted through the umbilicus.

VII. HAIRS ENCRUSTED WITH PHOSPHATE OF LIME OR OF MAGNESIA, AND SOMETIMES WITH URIC ACID : ALSO HAIRS SERVING AS THE NUCLEI OF CALCULI, PHOSPHATIC, OR OF UNKNOWN COMPOSITION. M. Magendie describes, in his *Recherches Physiologiques et Médicales sur les causes, etc., de la Gravelle*, an affection which he terms *gravelle pileuse*, in which small hairs, from a line to an inch or more in length, are passed with the gravel. M. Civiale, in his *Traité de l'Affection Calculeuse*, says, that he has often found dry mucous filaments among the gravel ; and still oftener, hairs introduced from the dust floating in the atmosphere. M. Rayer believes that he here alludes to pieces of cotton, wool, etc., which may easily escape from the clothing, etc. ; and these can readily be distinguished from real hairs. He quotes the details of two cases, in which gravel and small calculi were mixed with hairs in the urine : one is related by Mr. James Mitchell, in the *Edinburgh Medical and Surgical Journal* for July 1828 ; the other by Mr. Edward Parker, in vol. xxvii of the *Medico-Chirurgical Transactions*.

Some of the observations of Sir B. Brodie, M. Civiale, etc., on the formation of calculi round hairs as a nucleus are referred to. M. Rayer doubts the vesical origin of these hairs.

VIII. HAIRS IN THE URINE; GRAVEL OF AN INDETERMINATE NATURE ; PURULENT URINE. Under this head is given the account of an interesting case, which formed the subject of a scientific correspondence between Sir Hans Sloane, Dr. Yonge, of Plymouth, and Mr. J. Powell, at the early part of the last century. The correspondence is given in the *Philosophical Transactions* of that period. The subject was a plethoric woman, 50 years old. She had frequent nephritic pains, with purulent and gravelly urine. In the progress of the case, during an attack of pain, she passed a large quantity of matter containing a tuft of small hairs. Leeuwenhoek examined some of them, and believed them to be filaments of wool.

IX. HAIR-LIKE FILAMENTS IN THE URINE, IN THE SEDIMENTS, IN GRAVEL, OR IN CALCULI, CAPABLE OF BEING CONFOUNDED WITH HUMAN HAIRS. Under this head M. Rayer includes,—

1. Fibrinous filaments, more or less decolorised.
2. Mucous filaments, concrete or dried.

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[1] Medico-Chirurgical Transactions, vol. x, 1819.
[2] Medico-Chirurgical Transactions, vol. xxxiii, 1850.

3. Filaments of coagulated albumen ?—described by Dr. G. Bird, but thought by M. Rayer to be more probably casts of tubes.

4. Confervæ, etc., developed in the urine or on its surface some time after emission.

5. Filaments of linen, cotton, or wool, coloured or not.

6. Hairs of other animals, added accidentally or intentionally to the urine after it has been passed.

Conclusions. The hairs which are sometimes observed in the urinary passages, in the urine, in gravel, or in calculi, may arise in one of three ways:—1. By being formed in the urinary passages (trichiasis); 2. By being evacuated from cysts; 3. By being introduced from without.

1. *Trichiasis of the urinary passages* is a very rare affection. The number of cases in which it is alleged to have taken place is much reduced, when we remove from them those in which the urine was not examined as soon as it was voided, and those where the true nature of the hairs has not been established. Trichiasis is characterised by the emission of hairs in urine, either not sensibly altered in its appearance and composition, or containing more or less mucus, blood, or pus. The hairs may be intermingled with uric acid or phosphatic gravel; they may also be deposited on the surface, or disseminated in the interior, of calculi.

The emission of hairs sometimes takes place without pain (simple trichiasis); but it is more frequently accompanied by such complications, as dysuria, and sanguinolent, or purulent urine, etc.

The causes of this singular affection are quite unknown. From the cases observed, it appears most frequently to coexist with inflammation of the mucous membrane of the urinary passages, with gravel, or with calculi. Trichiasis has been observed in children, adults, and old persons, both male and female.

Nothing is yet known of the arrangement of the hairs, or of the anatomical state of the mucous membrane in trichiasis of the urinary passages; Maurice Hoffmann and Bichat having unfortunately omitted to examine the mucous membrane in those cases in which they allege that they found hairs in the urinary organs after death.

When trichiasis coexists with uric acid gravel, the employment of alkalies is indicated, as in simple gravel; acids are preferable when it is phosphatic gravel that the hairs are mixed with. For inflammation accompanying trichiasis, the ordinary antiphlogistic remedies are to be employed.

2. *The evacuation of hairs from cysts* constitutes a distinct pathological condition. These cases of pilimiction have only been observed in women; but the facts are generally well authenticated. This form is distinguished from ordinary pilimiction by the existence of a tumour, generally in the vicinity of one of the ovaries, and which can be recognised by a careful examination *per rectum* and *per vaginam*. The knowledge of any accidental circumstances which may have preceded the pilimiction will render the diagnosis more easy; while the emission or extraction from the urethra of pieces of membrane covered with hair, fragments of bone, teeth, etc., will confirm it. The surgeon may sometimes render very efficacious aid to nature by promoting the expulsion of hairs, teeth, calculi, etc., or by extracting them.

3. *The introduction of hairs into the bladder from without* is rare, but has occurred. A bunch of hairs, introduced into the bladder, has been known to become the nucleus of a calculus. Some surgeons believe that hairs may be introduced with the catheter; and M. Rayer has found hairs, filaments of wool, linen, and cotton, with fragments of calculi, often enough to lead him to suppose that they were introduced during lithotrity.

DR. JENNER ON THE USE OF THE NEUTRAL SULPHITES IN THE TREATMENT OF DISEASES ATTENDED BY THE DEVELOPMENT OF PARISITIC PLANTS, ESPECIALLY THE SARCINA VENTRICULI.

In the *Medical Times* of the 23rd August, there is an interesting Clinical Lecture, of which we give the following abstract. DR. JENNER has certainly added to the therapeutic resources of the physician, and thrown new light on the nature of a rare disease.

I seize this occasion of illustrating the advantages that the science of medicine has derived from the progress of the collateral sciences, and of proving to you that the microscope is not a mere toy for the non-practical man, but, "one aid the more" in enabling us to determine the disease under which the patient labours, and *so* of treating him the more successfully, and that a knowledge of chemistry may serve, in some cases, to direct us in our choice of remedies. * * * * *

CASE. James Martin, now aged sixty-six, the son of healthy parents, who died at the ages of eighty-two and eighty respectively, enlisted into the Artillery when eighteen years of age. He was discharged in 1824, and was working in the Thames Tunnel when the water broke in. In 1829, he entered the police force, in which he continued for seven years. After leaving it, he entered the Queen of Spain's service, and returned with the Legion in 1837. Though formerly of intemperate habits, he avers that for many years he had been very sober. With the exception of an attack of ague while in America, his health, up to the time of the accident in the Thames Tunnel, was excellent. From that event, he dates the commencement of his present ailment. While in the police, he suffered from intense pain in the epigastrium, and used often to retire into back streets, and there lean with his abdomen firmly fixed against an iron post. At first, the vomiting occurred once or twice a week; afterwards, every day. It was at this time, he says, that he first vomited blood. From the time of the accident he has been subject to constipation, for which he long tried all sorts of quack medicines; and, to relieve the pain in the abdomen, he took a teaspoonful of carbonate of soda twice a day.

In the early part of 1838, he entered University College Hospital, and, by his own account, has been unable to work since. He has been, at different times, both an in and an out-patient at this and other hospitals, and, on one occasion, was an inmate of the parish infirmary. He was an out-patient when I was appointed to this hospital, but too ill to attend himself. His wife came for his medicines. It was in consequence of the description she gave of the vomited matters (viz., that they frothed over the vessel in which they were received, like yeast), that I examined them microscopically. I then found the bodies described by Mr. Goodsir, in 1842, as sarcina ventriculi.

[Dr. Jenner visited the patient a year ago; and his state then was much as on admission into the hospital.]

While an out-patient, I tried for his relief nitrate of silver, hydrocyanic acid, creasote, morphia, henbane, large doses of carbonate of soda, etc. I thought the morphia lessened the frequency of the vomiting, but, although it produced drowsiness, it seemed to increase the pain. With difficulty I persuaded him to come into the hospital; and, so satisfied was his wife that death would speedily terminate his sufferings, that, after he had been in a few days, she earnestly entreated me to discharge him, lest he should die here.

He was admitted as an in-patient March 15th, 1851, and on the 16th the following notes of the case were taken:—Mind and special senses normal; *arcus senilis* strongly marked; can walk with facility, but feels weak; expression worn; is extremely thin; skin cool; mucous membranes pale; no sallowness of complexion, no anasarca, legs drawn up towards his abdomen, and his arms around his knees, shoulders bent forwards, his head resting on

the elevated inferior extremities ; tongue large, flabby, indented at the edges, and thinly furred ; no dysphagia ; appetite generally good ; had for his dinner yesterday two potatoes and some broth ; dined between twelve and one o'clock ; at five o'clock, P.M., vomited, ejecting the whole of the matters now in the basin in about five minutes ; the quantity of ejected matter reserved is two quarts.

Characters of the Vomited Matter. Floating on the surface is a layer, from a quarter to half an inch thick, of a brownish colour, closely resembling yeast in general characters, entangling in its substance quantities of air-bubbles. *Microscopical Elements.* Striated muscular fibres : sarcinæ ventriculi in great numbers, of a dark yellowish colour ; torulæ very numerous, undistinguishable from the yeast-plant in size and shape ; fat globules and starch.

After eating his dinner, felt comfortable and satisfied for two hours, then experienced considerable thirst ; about four o'clock, P.M., took a cupful of cold fluid. He thinks that cold fluids excite vomiting, hot prevent it ; that cold fluids cause pain, hot fluids relieve it ; from the time of drinking the fluid he felt severe burning twisting pain over nearly the whole abdomen ; the burning pain was most severe about the epigastric region, the twisting pain about the umbilicus ; to use his own expression, "he felt in a burning flame"; much flatus was discharged before vomiting, chiefly by belching ; each eructation of flatus was attended with severe sense of burning up the centre of the sternum, called by the patient "a flashing pain"; after vomiting, the pain and burning were considerably relieved ; still the pain continued during the whole night, increasing in severity at intervals. Five grains of extract of colocynth, with two drops of croton oil, were taken last night ; these operated about eight o'clock A.M., producing three stools ; the action of the bowels relieved a sensation of tightness. He had this morning for his breakfast, about eight o'clock A.M., a cup of tea and a little bread and butter. At twelve o'clock, complained of a nipping pain between the umbilicus and pubes, a burning pain from the epigastric region upwards over the right mammary and sternal region ; no vomiting to-day ; complains of tightness and fulness of abdomen. Abdomen convex ; convexity less marked at epigastric and hypochondriac regions, than below the umbilicus ; interval between recti-muscles distinct ; tenderness in epigastric and umbilical regions ; slight tenderness also in hypogastric, more in hypochondriac and umbilical regions. Some sense of resistance on pressure over recti-muscles ; resonance generally normal ; no tumour to be detected in any part of abdomen : there is, however, greater fulness in the vicinity of the pylorus than elsewhere (from tenderness and distension, the manipulation was less deep than subsequently) ; passes his urine freely ; pulse 60, regular ; lungs[1] and heart generally healthy, only the second sound at the base is murmurish. The stool contains a large amount of yellow amorphous matter, sarcinæ, and triple phosphates ; its reaction alkaline.

The daily reports from this time tell of his continued suffering ; of the frequency with which he was observed in (what is termed, in some of the reports) his old position.

On May the 29th, the report states him to have been much freer from pain. All sense of "flashing burning" gone ; lies ordinarily with legs extended, as if free from pain. His present state offers a striking contrast to his condition on admission. Bowels acted to-day. No stool the preceding three days.

As the hardness of the abdomen disappeared, and the distension diminished, it was pretty clearly made out that the stomach was dilated, the stomach-note being audible to the umbilicus ; and an ill-defined solid body was imperfectly felt about two inches to the right of the middle line, midway between the umbilicus and cartilages of the ribs.

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[1] The case has been much abridged as regards the organs not bearing directly on the disease.

His present state you have all witnessed; he suffers little pain; is freed from the eructation of flatus; his position is unconstrained; his abdomen is much less full than on admission; he is gaining flesh; the worn expression is comparatively trifling, and he sleeps well. The alteration in his general carriage and position strikes his wife and friends most forcibly. It is, he affirms, many years since he enjoyed the same state of comfort. I must briefly advert to the condition of his urine. It is acid when first passed, but becomes alkaline rather more quickly than healthy urine should. One of my excellent clinical clerks, Mr. Simpson, has been kind enough to examine it daily for some time, and he notices no difference in the degree of acidity, as manifested by litmus paper, whether Martin is vomiting or not. An analysis of the matter vomited before the man's admission to the hospital, was kindly made by Professor Graham. It contained a large excess of free hydrochloric acid, a little acetic acid, alcohol, and sugar; the gas disengaged was carbonic acid. It was identical, in all essential particulars, Mr. Graham says, with the matter vomited by a man suffering from sarcina ventriculi, under the care of Dr. Bence Jones, in St. George's Hospital.

Now, did the primary disease in the case of Martin, consist in the presence of the sarcina in the stomach, or was the sarcina (as Schlossberger from his cases concludes it invariably is) merely an epiphenomenon?

Let us see what lesions of the stomach experience has shown to be coincident with the occurrence of the sarcinæ. It appears from cases on record, and especially from the observations of Dr. Todd, recorded in the *Medical Gazette* of May 2, that if the food is retarded in its passage through the stomach, sarcinæ are developed there, and that thickening of the pylorus, narrowing of the pyloric orifice, and dilatation of the stomach, are the lesions most frequently found after death in such cases. Now, the pylorus is, in its healthy state, closed by muscular action. The muscular fibres by which this closure is effected, are, I need not say, of the kind termed plain, *i. e.*, they belong to the class of involuntary muscles.

Constriction of the pylorus may be organic or spasmodic. The pylorus is the seat of ulceration; the ulcer heals; contraction of the cicatrix follows; and hence stricture of the pyloric opening. The submucous tissue is the seat of the exudation of lymph, simple fibrillating or contractile lymph, or of fibro-plastic blastema; permanent stricture of the pylorus is the result; or the same tissue is the seat of cancerous infiltration, and coarctation of the same part follows. An error in diet is committed; digestion is imperfectly performed; and the pylorus, healthy in structure, refuses to allow the offending substance to pass into the duodenum. It is a well-known law of the animal economy, that increased demand leads to increased supply; that when a part is called on to perform extra duty, not only is the nutritive material carried to that part in quantity sufficient to compensate for waste, but in still larger quantities; and hence hypertrophy of the over-exercised structure ensues. This is especially true of the muscular system, and peculiarly so of the involuntary portion of that system.

Again, experience proves that when, from any cause, coarctation of the orifice leading from the hollow viscus takes place, the viscus itself frequently undergoes dilatation; whatever, therefore, interferes with the free exit of food through the pylorus, may lead to dilatation of the stomach.

Taking all these facts into consideration, it seems to me that the very presence of the sarcinæ, and of the fermenting intensely acid fluid may possibly, nay probably, (by keeping the muscular fibres that close the pylorus in constant action), be, in some cases, the cause of the organic coarctation of the pylorus and the consequent dilatation of the stomach, which are, as I tell you, so frequently the lesions found after death, where these vegetables have been detected in the vomited matter during life. But supposing that organic disease exists anterior to the development of the torulæ, and the sarcinæ, and to the secretion of the acid fermenting fluid, yet must we allow that the

irritation produced by their presence would be likely to excite spasmodic closure of the pylorus, and so add, at least, to the difficulty with which the contents of the stomach would find their way through the organically coarctated orifice; while the rapid disengagement of gas could not fail to increase the dilatation of the stomach, already over-distended by the ingesta.

Thus, then, whether the primary disease be (as, in some cases, I am disposed to regard it to be) the secretion of a fluid favourable to the development of the germs of sarcinæ, or whether the development of these bodies be the result of the retardation of the food in a dilated stomach, the consequence of a mechanical impediment to its transit through the pylorus (as in many cases I have no doubt *it is*); whether the vegetable organisms, and the fermentation which accompanies their development, be the cause or the consequence of the pyloric stricture, still must it be desirable to check their development and prevent their growth, as a means, if not of curing, at least of retarding, the progress of the organic disease.

But, allowing for a moment that our expectations could not reach thus far, yet, would it still be a gain to prevent the distension caused by the disengagement of the carbonic acid, the product of fermentation, to check the formation of that flatus, the very eructation of which is a constant source of distress to the patient. "The three symptoms"—says Dr. Walshe, speaking of cancer of the stomach—"which most torture patients, and for which they most earnestly implore relief, are flatus, vomiting, and constipation." But to return to Martin, and to the bearing of his case on the question here stated. Some years since, he suffered from mechanical violence; subsequently he had hæmatemesis, suffered from pain in the abdomen, and vomited his food often many hours after eating it; and presumptive evidence is afforded, by percussion and palpation, of dilatation of the stomach, and thickening of the pylorus. When he first came under our observation, the symptoms, according to his own and his wife's account, had continued almost unabated in intensity for many years, and certainly they were as severe three years since as they were on his admission.

The long continuance of the stomach disease (more than twenty years) without marked alteration of the symptoms, without the implication of other organs, and without any indication of the existence of constitutionally malignant disease, as well as the fact that vomiting of blood was among the earliest of the symptoms, renders the existence of schirrhus of the pylorus improbable, while it renders the existence of ulceration in the vicinity of the pylorus, cicatrisation of the ulcer, and subsequent thickening of the submucous tissue, extremely probable; but still remember, only probable. Taking, however, this view of the primary stomach disease, I cannot but think that this organic coarctation of the pyloric orifice and dilatation of the stomach, have both been increased by the presence of the sarcinæ, the torulæ, the acid fluid that, under the stimulus of their presence, is poured into the stomach in such large quantities, and the gas which accompanies their formation. I have read to you some notes, which illustrate the improvement that has taken place in our patient's condition since his admission into the hospital. Let us now see by what means that improvement has been effected.

It appears from the notes, that, from his first admission till the 5th of April, he vomited almost daily an enormous amount of thick fluid in a state of fermentation, loaded with sarcinæ and torulæ. To give you an idea of the quantity, I may mention, that, on March 16, he vomited two quarts; on the 17th, one quart; on the 19th, a pint and a half; on the 20th, one quart; on the 22nd, five pints; on the 24th, two pints and a half; the drugs given during the same three weeks were hydrocyanic acid, acetate of morphia, and sulphate of zinc. You will remember he had previously taken creosote, nitrate of silver, etc.

He now commenced to take sulphite of potash. The power exercised by the remedy has been most remarkable and most unequivocal.

Before taking it, he was vomiting daily from forty to one hundred ounces of the fluid, loaded with sarcinæ and torulæ; thus, on the first of April, he vomited one hundred ounces; on the evening of the 2nd, between seventy and eighty ounces, although he had the same morning, from the action of sulphate of zinc, vomited fifty ounces. No vomiting on the 3rd. On the 4th, in consequence of the extreme pain and sense of distension, sulphate of zinc was again administered.

On the 5th, he took ʒss. of the sulphite of potash early in the morning; in the evening he vomited. On the 6th the dose was increased to one drachm. On the 7th, he vomited twelve ounces only of acid fluid, on the surface of which there was but a small amount of scum; it contained perfect sarcinæ, but no torulæ.

From the 8th, he took three drachms of the sulphite daily, each dose being given in ʒiss. of water. At 6 A.M. on the 9th, he ejected from the stomach four ounces; the sarcinæ were now decidedly less numerous, and there were no torulæ. In the evening of the 6th he again vomited, but the vomited matters were now free from sarcinæ and torulæ, and there was no appearance of fermentation. Between the 9th and the 18th he vomited three times, but on neither occasion did the vomited matter contain sarcinæ or torulæ.

From the 16th of May to the 19th of June, the vomited matter contained no trace of sarcinæ or torulæ, and had lost its yeasty odour and appearance. *During these thirty-three days he ejected about two hundred and thirty ounces of acid fluid; during the first eight days of his residence here he ejected three hundred and eighty ounces.*

Now, gentlemen, I wish particularly to impress upon you the marked improvement that followed in this case from the cessation of the production of the sarcinæ. Coetaneous with their disappearance, the sense of distension and the terrific eructation of flatus ceased; the burning pain at the epigastrium abated considerably, and the pains which our patient described as "flashing, darting upward", vanished. By preventing the formation of the sarcinæ and stopping the fermentation, we have, then, greatly relieved his sufferings; and, allowing the existence of organic stricture of the pylorus, we have placed the patient in a much more favourable position than before, for we have removed a cause of constant spasmodic constriction of the pylorus, and have placed the stomach in a much more favourable position to resume its normal dimensions, by preventing the formation of the gas, one cause of its constant distension; and it is obvious, that if a dilated, hollow muscular viscus is to resume its normal size, it must never be allowed to become distended.

But perhaps it may be supposed that diet has assisted in removing the sarcinæ. Not at all, for Martin has had a pretty liberal supply of arrowroot, beef-tea, mutton, milk, bread, and potatoes, with two ounces of rum daily. It is true the sarcinæ return directly the sulphite of soda is omitted; but then, even though it were necessary for this man to continue its use for life, it would be no great trouble. Sulphite of soda is not more disagreeable to the palate than carbonate of soda, and is less injurious, and many take the latter daily. But I hope, by steadily pursuing its use, by the employment of unfermented bread, as to-day suggested by Mr. Graham, and by some other alterations in his diet and drugs, that ultimately he may be able to omit the sulphite entirely.

I cannot conclude without observing, that considerable benefit may be anticipated from the employment of sulphurous acid in all diseases attended with the developement of parasitic plants. I would mention porrigo especially. That it would prevent the growth of the epiphyte there is little doubt; and, should it do so, and yet not cure the disease, the question of the

relation between the two would be settled. In some forms of dyspepsia, attended with the discharge of large quantities of flatus, I think I have seen considerable benefit from its use. On the whole, I am satisfied that in the sulphite of soda we have a valuable addition to our materia medica.

Let me advise such of you as may be tempted to employ the neutral sulphites, to test them before administering them. An omission of this precaution may lead to disappointment.

Without the microscope, the vegetable bodies could not have been detected, and without the aid of the chemist the remedy for them would have been unknown. Let me add, that I have shown that more than temporary benefit sometimes accrues to the patient from the treatment of individual symptoms.

WAYS IN WHICH DEATH OCCURS.

In a series of able papers, *On the Different Ways in which Death Occurs*, Mr. B. W. Richardson comes to the following conclusions respecting *syncope*.

Syncope may arise from two kinds of derangements in the circulating machinery,—firstly, from blood being *diverted* from the heart; and, secondly, from the heart being *overcharged* with blood.

The heart does not depend for its power to act on any nervous agency, but simply on the stimulus of blood. The value of the recumbent posture in restoring animation during syncope, does not rest on the cause (so commonly believed), that during recumbency the brain is re-supplied with blood, and so the heart with nervous power, but on the fact, that when a person faints whilst sitting or standing, the heart fails to do more than to throw its blood over the arch of the aorta; and as this even is not done with sufficient force to ensure a returning venous current in opposition to gravity, the whole of the blood is allowed to accumulate in the vessels below the heart. But the patient at this point falls, or is laid down, with the upper part of the body lowest, the position of the ascending venous currents is thus entirely changed, the returning blood gravitates into the heart, and the organ re-supplied with stimulus, starts again into play, and animation returns.

This explanation affords also a key to many pathological phenomena; thus hæmorrhages from the lower half of the body are always much more dangerous than those from the upper, because in such cases the lower half of the body is a running cistern—not a reservoir of blood.

Syncope, following purgation, or the abstraction of fluids from cavities, is induced by the sudden rush of blood that takes place into the unloaded parts, the heart being thus as effectually robbed as in hæmorrhage.

Ruptures or wounds of the heart may not be followed by instant death, and this especially holds good if the wound or rupture occurs at the upper part of the organ; because in such cases, as soon as the organ gets so full as to pour out its blood through the artificial opening, contraction of the walls of the heart begins to take place, which contraction, as it expels the blood through the natural channels, closes also the rupture or wound.

Rupture of the sound heart scarcely ever occurs, except from a severe fall, in which the body alights on the feet or breech. Such falls lead to rupture of the heart or aorta, by the concussion of falling bringing down the blood that is passing through the ascending aorta, in the same way as the concussion produced by bringing the bottom of a bottle, containing a fluid or powdered substance, sharply on a hard body causes the powder or fluid to sink lower. In this way also, aneurism at the root of the aorta is accounted for, as produced by leaping, riding, and the like; here, the concussion, though not sufficient to cause a rupture, leads to a state next to rupture—viz., dilatation.

A beautiful provision against these accidents is found in inferior animals, where running, leaping, etc., are required, inasmuch as in them the circu-

lating currents from the limbs do not enter the heart perpendicularly, but through the medium of horizontal vessels, so that no amount of concussion in falling upon the feet can overwhelm the heart with an increased flow of blood upon it.

In syncope during advanced pregnancy, the danger is very great, because the recumbent position is of no avail; for the gravid uterus falling backwards on the vessels running to the heart, acts like a ligature around them.

Syncope in labour never, or at all events rarely, occurs during a pain: this, in consequence of the mechanical necessity, that by each uterine contraction a large quantity of blood previously contained in the uterus is poured back into the general circulation, by which the heart is continually supplied with stimulus.

Heat, applied to the general surface, will sometimes give rise to syncope when the heart is hypertrophied. The syncopal attack is brought on in this case from an increased temperature dilating the capillaries, into which the over-acting heart forces its blood and empties itself.

Syncope may occur from the heart being overpowered with blood, and becoming paralysed by its own efforts, in the same manner as ordinary muscles are sometimes temporarily paralysed by sudden extreme exertion. Death probably arose from syncope so induced, in those experiments on rabbits, where Sir Astley Cooper suddenly arrested the flow of blood passing through the carotid and vertebral arteries; and cases are narrated in which a tendency to syncope has followed the compression of large arteries in the human subject.

The heart may also be overwhelmed from causes acting on the venous system. Thus from the days of Harvey it has been known, that in abstracting blood from the arm, the patient often faints on the removal of the fillet. This ensues from the flood of nervous blood suddenly released, returning upon the enfeebled heart and overpowering it in a greater or lesser degree, just as in transfusion of blood after hæmorrhage the heart is liable to be overpowered, if the injected blood is thrown into the circulation with too much force. A case is also supplied to illustrate that a temporary mechanical arrest of the venous circulation in the neck, may be followed by the same effects on the obstacle being suddenly removed.

Under the head of syncope from derangements at the heart, the effects of barriers (as indurated valves, etc.) in the cavities of the heart, and the effects of shocks to the heart, are considered. Reasons are adduced to prove that barriers on the left side of the heart are most dangerous, and it is suggested that all barriers act detrimentally in two ways—firstly, by opposing the currents of the blood, and secondly, by preventing the walls of the heart from approximating closely during their contraction, thus rendering the organ unfit to adapt itself to various quantities of blood.

Among the causes which act on an *obstructed* heart to produce syncope, *exertion* is placed first by Mr. Richardson; and the doctrines of Dr. Latham concerning shocks to the heart are dwelt upon. It is shown that the cause why the heart never gets over a severe shock, as described by Dr. Latham, rests in the fact, that the heart can never rest after the shock, and so never regains full power. It may play on, but its nice equilibrium is lost.

Exhaustion of the body, and sudden changes of position, are also dwelt upon as common causes of syncope during the existence of obstructions at the heart. And lastly, an opinion is expressed, that in some states the blood during life, in the course of agitation against the valves of the heart, may deposit its fibrine. And that in the event of an indurated valve being present, a fibrinous coagulum may be suddenly deposited upon it, of sufficient size to arrest the play of the heart, and to bring on fatal syncope. A case illustrative is also supplied.—[Abstracted from *London Medical Gazette*, February 28th, March 21st, April 11th, August 8th, 1851.]

COLCHICUM IN THE COMA AND DELIRIUM OF SCARLATINA.

The paramount importance of restoring the action of the kidneys in scarlatina is fully recognised by all practitioners; but the best method of accomplishing this object is not always easily determined. We have used colchicum for the cerebral symptoms as well as for the rheumatism of scarlet fever, and we have seen both good and evil results from its action. It must be borne in mind, that in scarlatina the kidneys are in a state of excessive hyperæmia, and that to relieve this condition is a primary indication. The appropriate means will vary according to the nature of the case; but we confess that we would rather trust to large hot bran poultices to the loins, and the due exhibition of carbonate of ammonia internally, in such cases as those referred to by Dr. Hughes Bennett, than to the method he advises. The use of colchicum, however, is a proper subject of investigation and experiment. In this way, its legitimate sphere may be determined. Its conjunction with carbonate of ammonia we look on as judicious. For the sake of drawing attention to the subject, we quote the following notice by Dr. Hughes Bennett from the *Edinburgh Monthly Journal* for August 1851:—

"A boy, æt. 14, entered the clinical ward on the third day after experiencing distinct rigors. There was restless delirium, and constant moving of the head from side to side on the pillow. He was apparently conscious when spoken to, but could not answer questions; the tongue was protruded with difficulty, dry, and of bright red colour, studded with florid elevations; deglutition was much impeded—bowels open—pulse 130, weak—urine voided with difficulty, and diminished in quantity—sp. gr. 1025—not acted on by heat and nitric acid—skin hot and dry, covered with the bright red scarlatinal eruption—ordered salines and slight diuretics. He continued in the same condition, the angina, coma and alternating delirium, however, being more pronounced until the sixth day. During this period all the urine passed was carefully examined. The amount was diminished (seventeen ounces per day), but it was free from deposit, and unaffected by heat or nitric acid. ℞ Sp. æther. nit. ʒiij; pot. acet. ʒiij; tr. colchici ℥ss. aquæ, ℥iij. Ft. mist. A teaspoonful to be taken every four hours. On the following day all coma and delirium had disappeared. He answers questions when put to him—skin cool—eruption faded—pulse 96, weak—passed thirty ounces of urine, which is turbid, with small flakes of a membranous character floating in it. On the eighth day the quantity of urine excreted was fifty ounces, and it was still more loaded with sediments. On examining the urine with a microscope, it was seen to contain—1st, membranous flakes, composed of aggregated rounded particles, apparently agglutinated together, and strongly resembling some forms of vegetable tissue—2d, rounded and irregular masses with spicula—3d, amorphous molecular masses. The whole of these elements, on being analysed by Mr. Drummond, were found to consist of urate of ammonia. Next day the urine was only slightly turbid, and on the following one, was perfectly clear. From this time the boy gradually recovered.

"Commentary.—This was a very severe case of scarlatina. The angina was intense, occasionally rendering deglutition impossible. There was delirium on the third day, alternating at night with coma, which was often profound. The worst result was apprehended. It recurred to me that the head symptoms in this as in several cases of typhus, might probably depend not so much upon inflammation of the brain, as is generally supposed, as upon absorption of, and poisoning by, urea; an idea that appeared to me supported by the diminished quantity of the renal excretion, as well as its freedom from all deposit. Remembering the alleged virtues of colchicum in increasing the elimination of this excretion, I ordered it, in combination with diuretics, and the result was remarkable. For on the next day, not only had the fever diminished, but the urine was increased in amount and loaded with urates to an extent and in a form I had never previously seen. It may be argued that the fever had terminated by a natural crisis on the

seventh day; but I cannot help thinking that in this case nature was assisted by the colchicum and diuretics. At all events, this medicine seems to me worthy of more extensive trial in scarlatina accompanied by diminution of urine and head symptoms."

DR. CATHCART LEES ON VOMITING, AS SYMPTOMATIC OF DISEASE OF THE KIDNEYS.

Dr. Cathcart Lees has published, in the *Dublin Quarterly Journal of Medical Science* for August 1851, some remarks on the sympathetic vomiting which occurs in connexion with disease of the kidneys. He says that, if the vomiting be symptomatic of a calculus in the kidneys or ureter, the diagnosis is seldom very difficult, as the situation, the suddenness, and the violence of the pain, coincident with severe vomiting, generally guide to the seat of the disease. If there be disease of the kidneys without a calculus, or if the calculus cause no pain or tumour, the diagnosis is more difficult. In a case published in the *Dublin Quarterly Journal*, new series, vol. viii, p. 357, Dr. Lees states that vomiting led him to suspect the presence of a renal calculus —a diagnosis which afterwards proved correct. He believes that the vomiting in this case arose from mechanical irritation by the phosphatic crystals, the stomach participating through the influence of the splanchnic nerves.

In another case, an old woman had suffered from constant vomiting: after death, the left kidney was replaced by a large cyst, from the mouth of the ureter having been blocked up by a calculus, so as to prevent the excretion of urine. In another case of a man aged 43, admitted into the Meath Hospital under Dr. Lees, there was frequent vomiting, without sufficient evidence of gastric disease. From an examination of the urine, Dr. Lees diagnosed disease of the kidneys, most probably fatty degeneration; andt his opinion was confirmed some time after by *post-mortem* examination.

Nausea and vomiting are very frequent towards the latter periods of chronic degeneration of the kidneys; but they furnish no positive diagnosis, being met with in various renal affections. There is nothing in the nature of the matters evacuated, or in the times of vomiting, which seem likely to serve as a correct guide to the *seat* of the disease. We must therefore take into consideration the history, age, and sex of the patient, and particularly the situation to which the pain is referred; and, even with the most careful examination, we shall often be puzzled, particularly in obscure cases of vomiting connected with cerebral disease.

In the treatment of these cases of chronic vomiting, if it occurs early in the morning, when the patient is fasting, Dr. Lees finds the most successful plan to be that of making him take some light kind of food before getting up, remaining quiet for a short time afterwards. If it occurs at an early period of the disease, and particularly if pain or weight in the loins is complained of, cupping in that region to three or four ounces, affords great relief. In some cases, most satisfactory results have followed the use of equal parts of boiled milk and lime-water, given frequently during the day, especially when diarrhœa was present. In other cases, one, two, or three drops of hydrocyanic acid, with three grains of bicarbonate of soda, repeated every three hours, and given immediately before food or drink, is taken, proves useful. Creasote, in doses of one or two drops, frequently repeated, is also often of service. In one case—a young girl labouring under general anasarca, with constant vomiting and severe diarrhœa—much benefit was derived from the liquor ferri pernitratis, in five-drop doses, four times a day.

Occasionally a blister over the stomach, a little brandy, or from twenty to thirty drops of Hoffmann's anodyne liquor, will check the vomiting. Opium is objectionable, on account of the tendency to head symptoms which exist when the structure of the kidneys is deranged, and because, in many cases, it is difficult to determine whether the symptoms are caused by mere mechanical irritation or obstruction, or whether they depend on the general poisoning of the system with urea and other excrementitious substances.

SURGERY.

DIAGNOSIS OF GRANULAR AND GONORRHŒAL OPHTHALMIA.

M. Henrotay, in the *Annales d'Oculistique*, points out the distinctive marks between granular and gonorrhœal ophthalmia. He observes that it is only by local inspection, and by the progress of the case, that the nature of the affection can be decided on; for the antecedents are often deceptive. A man who has gonorrhœa may have common granular ophthalmia; and a man free from gonorrhœal symptoms, may accidentally get blennorrhagic ophthalmia.

The starting point in the diagnosis, is the *marked difference in the mode of development of the two affections.* The invasion and progress of gonorrhœal ophthalmia is very rapid; and hence it produces œdema rather than firm granulations. This character is found both in the lesions of the conjunctiva and of the upper eyelid. The swelling of this eyelid is, in fact, œdematous; its external surface presents a slightly bluish aspect. The impression made by the fingers remains for some time. It is very difficult to erect the eyelid: and, when this is effected, the mucous membrane is found to be smooth, and the ecchemosis to be serous.

In granular ophthalmia, on the other hand, the evolution of the disease is less rapid;[1] hence firmer granulations are formed. The enlargement of the upper eyelid is not altogether œdematous, but depends in a great measure on the great development of palpebral granulations. The external face of the eyelids preserves its natural colour, or is a little red. The fingers leave no mark; the eyelid is easily turned back; its internal surface is rough. The muco-pus is more creamy, and the chemosis is sanguineous.

Granular ophthalmia may last long, and become chronic; in which state, an acute attack may be occasionally brought on. Gonorrhœal ophthalmia either disorganises the eye, or gets well in a few days.

M. Henrotay says, that epistaxis is of very common occurrence in sub-acute purulent ophthalmia, but that he has never met with it in gonorrhœal ophthalmia. He does not attach much importance to the pre-auricular bubo, mentioned by M. Hairion. [Abridged from *Gazette Médicale*, 16th Aug., 1851.]

PHAGEDENIC ULCERATION OF THE VULVA.

M. Huguier presented to the Surgical Society of Paris, Oct. 1, 1851, a specimen of this form of disease, which, in his published researches, he has distinguished from other forms of ulceration with which it has been confounded.

A woman suffering under lupus of the external generative organs, had been several months under the care of M. Vernois. The usual modes of treatment had all failed; the ulceration, continuing its ravages, had destroyed all the vestibule, a part of the nymphæ, half of the urethra, and had extended to the soft parts on the pubis. Five months since, this patient came under the care of M. Huguier, who, seeing the inutility of previous treatment, and the tendency of the disease to spread, determined upon an operation. By means of a bistoury, all the disease was removed; the entire urethra was sacrificed, the incisions having been carried to the sub-pubic ligament; a part of the recto-vaginal septum was also removed. Hæmorrhage was but trifling. The cure was perfect. The loss of the urethra did not impair the functions of the bladder. Cicatrisation was complete in twenty days. Two months afterwards she had died from an iliac abscess, with caries of the bone.

M. Huguier presented the genitals of this patient; no trace of lupus

[1] This does not agree with the statement of M. Fallot, that military ophthalmia is sometimes very rapid in its course.

could be discovered; the cicatrices were perfectly healthy. M. Huguier stated that he had frequently performed the same operation with equal success. [*Medical Gazette.*]

NECROSIS OF THE CRANIAL BONES AFTER ERYSIPELAS.

M. Larrey relates the following singular case:—In a patient, 52 years of age, the scalp having become detached by suppuration, inflammation of the bone followed, and was productive of necrosis and separation of the entire bones of the arch of the skull. The patient had not presented any signs of disorder of the cerebral system, although the membranes of the brain were covered only by integument, so that the movements of elevation and depression of the brain were perceptible.

*** A parallel to this case was seen in that of a patient in Bethlehem Hospital, who, having been too vigilantly watched, to permit his executing his suicidal intentions in any other way, laid the back of his head on the fire, and completely charred the scalp, destroying the vitality of a large portion of the skull. The arch of the cranium became detached, and was deposited by Mr. Lawrence in the museum of St. Bartholomew's Hospital, while the patient was living in Bethlehem for several years with only membranous and tegumentary covering to his brain. [*Medical Gazette.*]

OBSTETRICS.

INDIAN HEMP: ITS POWER OF INCREASING UTERINE CONTRACTION DURING LABOUR.

Dr. Alexander Christison, in a series of papers upon the *Natural History, Action, and Uses of Indian Hemp*, has made a most important addition to our knowledge of therapeutic agents. He establishes its remarkable power of increasing the force of uterine contraction during labour. After subject seven cases, he makes the following remarks:—

"There can be no doubt that the *intensity* of the pains was greatly augmented by the hemp, except in the last case, where, after the effects of the first dose passed off, no action followed the repetition of it. This case was an exception to all the others.

"It is worthy of remark, that in none of these cases were the ordinary physiological effects produced; there was no excitement or intoxicating action, and there did not seem to be the least tendency to sleep in any of them.

"In conclusion, I may state what appears to be the most obvious difference between the action of ergot of rye, and that of Indian hemp. First,—While the effect of ergot does not come on for some considerable time, that of hemp, if it is to appear, is observed within two or three minutes. Secondly,—The action of ergot is of a lasting character, that of hemp is confined to a few pains shortly after its administration. Thirdly,—The action of hemp is more energetic, and perhaps more certainly induced, that that of ergot.

"There appears little doubt, then, that Indian hemp may often prove of essential service in promoting uterine contraction in tedious labours.

"More extended experience will show how far these effects may be depended on, and to what cases hemp is most applicable.

"Mode of Administration. Indian hemp may be administered in several ways. The extract, in the form of pill, produces the most gradual effect, and the disagreeable taste of the solution is avoided; but its action in this form is very uncertain. The following emulsion has been recommended:—A scruple of the extract rubbed in a warm mortar with a drachm of olive oil, to which are added half an ounce of mucilage, and seven ounces and a half

of distilled water (Bromfield). But the simplest method is to use the tincture, which should be dropped into a little water, and immediately swallowed. The water may be sweetened with sugar, or an aromatic, such as compound tincture of cardamoms, may be added. The usual strength of the tincture is three grains of the extract to a drachm of rectified spirit.

"The extract may be given in doses of one to six grains; the tincture in doses of ten to thirty drops, for ordinary purposes. Less than thirty drops is of little service in promoting uterine contractions; and greatly larger doses, as much as one or two drachms repeatedly, must be used in the treatment of tetanus, in which disease there is very great tolerance of the remedy.

STEINLEIN ON THE CONTENTS OF FATTY OVARIAN CYSTS.

Dr. Steinlein, of Zurich, has investigated the occasional formation of hairs, teeth, and pieces of bone, in ovarian cysts. They cannot be considered as the products of extra-uterine gestation, for they are met with in individuals who have not reached puberty.

The cyst is composed of several layers; an external one, formed of fibres of loose areolar tissues, irregularly disposed; another layer, in which the fibres are more regular; then a layer of elastic tissues, and finally an epithelial coat. This epithelium covers the whole internal surface, and it exhibits a great number of small isolated dull spots, contrasting with the brilliancy of the rest of the surface. On the bright portions, the epithelial cells are round and regularly disposed, while the cells in the other parts form lamellæ, laid one on the other. If the lamellæ be removed, round and regularly arranged epithelium cells are found beneath them. Most commonly, there is a small wart-like projection on these dull spots. If the epithelium be removed, an appearance is presented of highly-developed papillæ, regularly disposed. Microscopic examination confirms the resemblance to the dermis. These are the parts where the hairs are found, in a hair-follicle; sebaceous glands also open into the follicle, and there are also sudoriparous glands. This analogy in structure between the ovarian cysts and the external skin, explains the presence of fat: it is the secretion of the sebaceous follicles.

These cysts commence as small fleshy bodies, as large as a hemp-seed, occupying the situation of a Graafian follicle. At a later period, the body becomes isolated from the follicle, and is connected to it only by a pedicle, conveying blood-vessels. The sebaceous glands are soon developed; fat fills the cyst, and epithelial scales are mixed with it, as also, in time, the secretion of the sweat-glands.

In very young cysts, there are no hairs; these are first formed in the wart-like projections. They have the same structure and development as ordinary hairs; they may attain the length of four inches, and then fall off, being succeeded by new ones. This explains the number of hairs occasionally found. The presence of teeth is not at all inexplicable, when we remember that they are naturally formed from a folding-in of the external integument. The pieces of bone are not so easily explained; they may bear some relation to the osseous formations occasionally met with in the skin. [*Zeitschrift für Ratunelle Medicin*, quoted in *Gazette Médicale*, June 7, 1851.]

CONGENITAL SMALLPOX IN TWINS.

Dr. Ayer was called, in haste, to Mrs. P., and found her in great pain. On examination, the head of a small fœtus was found born. The uterine contractions were active, and its full delivery effected in a moment, attended by a feeble cry. The pains continued, a bag of fluid was felt protruding, and soon a second fœtus was expelled dead. Two separate placentæ were afterwards removed. The infants were of the size and development of six months. The living one had a dozen or more of pustules, on the face, head,

and breast; one or two were noticed on the abdomen, but none on the limbs. Three or four were good-sized, plump, and well-defined pustules of smallpox. The remainder were not so full, but evidently of the same character. This one survived its birth two hours. The dead child had no offensive odour: the abdomen was dark purple, and the cuticle quite loose. Its whole body, especially the abdomen, was marked with depressions, similar to those of variola in infants, after death. No elevations or pustules were noticed; these marks only remained.

Three weeks before the abortion, the mother, I was informed, had broken out with variola, after the usual premonitory symptoms, and had just recovered when I saw her. The disease was so mild that a physician was not called. She could not trace her miscarriage to any over-exertion, or any cause, except the attack of varioloid. Whether the mother infected the two at the same period, and the death of one caused the expulsion of both; or one had the disease first, and the second received it from him, are questions of some interest, but difficult, from the evidence, to decide. [Boston *Medical and Surgical Journal*, 18th June, 1851.]

SMALLPOX DURING THE SEVENTH MONTH OF PREGNANCY: PLUMP CHILD BORN AT THE FULL TERM.

Dr. S. F. Parcher, of E. Boston, writes as follows to the Boston *Medical and Surgical Journal*, for July 2, 1851:—

"I was called, recently, to attend a young married lady, who, I was informed, had been suffering *intense* pain for the twenty-four hours previous. I found the patient with hot skin, dry red tongue, high arterial excitement; pulse 110 per minute, full; severe pain in the head and back, and in the *seventh* month of pregnancy. Prescribed leeches to the temples, and hyd. and jalap, āā gr. x, followed with saline draught, and diaphoretics. In about thirty hours pustules made their appearance, and continued until the case assumed the appearance of genuine smallpox. She passed through the various stages favourably, and convalesced as rapidly as usual, save a slight ophthalmia, which retarded somewhat the cure, went her full time, and gave birth to a fine, plump, healthy girl, without the least appearance of its having had the disease. Vaccination had no effect upon it.

"*Query.* Can the mother, during the last months of pregnancy, go through with smallpox and not affect the child in utero? If so infected, will there not be unmistakeable evidence upon the skin? or does exclusion of light and air prevent scarring, and thereby leave a smooth surface?"

EXTRA-UTERINE PREGNANCY OF TWENTY YEARS' DURATION.

A woman, forty years of age, was suddenly seized with symptoms of internal strangulation, under which she sank. Dr. Christian, under whose care she was, discovered in the abdomen a large tumour, situate in the right iliac fossa and lumbar region. This tumour had first appeared some months after her marriage, twenty years before, at which time labour had come on at the sixth or seventh month, without any result; the movements of the fœtus had suddenly ceased, and the labour itself was arrested. After this period she had borne eight children. The autopsy showed a tumour of the size of a large ostrich's egg, enveloped in a cyst with ossified walls, except at its superior part, and enclosing a fœtus of six or seven months, as well preserved as if it had been artificially enclosed after the labour,—still having its umbilical cord fixed to the interior wall of the envelope which represented the placenta, and which was completely ossified. [*Pilad. Med. Examiner*, in *L'Union Médicale*, 15th July 1851.]

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

Friday, October 10, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Homœopathy. This was a Special General Meeting of the Society, held for the purpose of considering the subject of medical men practising the homœopathic system of quackery. Fifty-seven fellows were present.

The following Resolutions recommended by the Council were unanimously adopted :—

i. That in the opinion of this Society, the practice of homœopathy, or the prescribing medicines in what are called "infinitesimal doses", under a pretence that they are useful in the cure of disease, is founded in palpable error, is a delusion on the part of the practitioner, a deception on the public, and manifestly dangerous to its welfare.

ii. That the Fellows of the Medical Society of London cannot honourably hold any professional communion with homœopathists.

iii. That consequently, any Fellow of this Society who shall hereafter practise homœopathy, or who shall knowingly meet in consultation any professed homœopathist, will thereby render himself unworthy of the Fellowship of this Society.

Saturday, October 11, 1851.

Edward W. Murphy, M.D., President, in the Chair.

This was the first ordinary meeting of the society. Fifty-eight fellows were present ; and also a number of visitors.

Duration of Pregnancy. By Dr. Murphy. Dr. Murphy stated, that he proposed, upon some future occasion, to bring forward the subject more fully : he, therefore, on this occasion limited himself to a mere outline of the method he had pursued, and its results. He hoped that other practitioners might aid him in the solution of the problem by adopting a similar plan. The two questions he proposed for consideration are,—Is the duration of pregnancy a fixed or a variable period ? and, if it be decided that it is variable, What are the limits of its variation ? The usual mode of calculating the term of pregnancy is by dating from the last period of the menses to the time of delivery, the gross results being corrected by deducting as many days as is supposed necessary to avoid error. Some, believing that conception may take place at any time, deduct one-half the menstrual interval ; while those who consider that conception can only take place at a menstrual period, date either from the last catamenia, or from that which should have happened, but for conception. This estimate being compared with the period of quickening, a result is obtained sufficiently accurate for ordinary practical purposes, but not precise enough for legal evidence. Other indications have, therefore, been sought for. Peculiar sensations are experienced by some women at the time of conception : some cases of this kind, described by Dr. Montgomery, would tend to fix the duration of the pregnancy at two hundred and eighty days. In other cases it has been ascertained by the date of a solitary intercourse, which, of course, fixes the date of conception ; the same period of two hundred and eighty days is, from such cases, given by Sir C. Clarke and others, and from these facts many are inclined to regard that period as the correct duration of pregnancy. To this opinion, however, Dr. Murphy does not subscribe, as these cases are comparatively few in number, and, if the rule were different, might easily form an exception to it without invalidating it. He would, therefore, call in the aid of statistics for

the solution of the problem; this he commenced some years since, at the University College Hospital, when forming a register of obstetric cases. The following method was adopted:—When a letter for attendance was applied for, an inquiry was made as to the catamenia, the age of the applicant at its commencement, its period, and its last appearance. With regard to the last question, some could only give the month, others were precise as to the date, and some were too irregular to date from. The last were excluded from the inquiry, as, for instance, some who were nursing either had no change, or a very irregular one; others had been always irregular before pregnancy, and therefore could not be depended on; and again, with others, the catamenia had evidently continued after conception: all these were excluded as the others were noted, and when delivery occurred, that also was noted, the interval between the two giving the gross duration of pregnancy, which was afterwards corrected, so as to make as near an approach to accuracy as possible. Of these cases, some time back, a table of 186 was formed. The corrections were made as follows:—If the period exceeded 280 days, and the woman had given the exact date when she was last unwell, the whole menstrual interval was deducted; so, if the whole period were 328 days, and 28 days were the menstrual interval, 300 days would be regarded as the true duration. It was considered that the woman might be in error, and it was thought safer to suppose that conception occurred just before the catamenia which had been arrested. Subsequently 280 days were regarded as the true period, and in any cases that exceed, the menstrual period is deducted, the result being presumed to be accurate. From his records of 965 cases, Dr. Murphy has formed four tables: 1st, those in which the duration of pregnancy exceeded 280 days, including 303 cases; 2nd, those that are exactly that period, including 378 cases; 3rd, those between 260 and 280 days, including 201 cases; and 4th, those below 260, including 83 cases. The 4th, or last table, he (Dr. Murphy) looks upon as instances of premature labour. From these tables he gathers that the duration of pregnancy is not a fixed but a variable period, as in the lower animals, varying, however, only within certain limits. Those limits are not yet ascertained. He regards 260 days, or 37 weeks, as the shortest period; he has attended mature infants born at that date. The longest period is yet *sub judice*, the cases in the first table being yet under examination, and requiring correction.

Saturday, October 18, 1851.

Edward E. Murphy, President, M.D., in the Chair.

Therapeutic Uses of Creasote. By B. W. Richardson, Esq. Mr. Richardson had never used creasote in true Asiatic cholera, but he had fully tested its value as an astringent, and in some cases of diarrhœa, he had never before seen half so good a remedy. The cases in which it is most useful are of three kinds: 1st. Cases of diarrhœa during ordinary epidemics, where the disorder cannot be traced to the presence of foreign matter in the intestines. 2nd. Cases where profuse diarrhœa follows the employment of purgatives, given to remove foreign matters during intestinal disorders. 3rd. Cases in which, after an acute diarrhœa, the patient continues to be troubled with frequent and sudden liquid evacuations, not attended with pain or great constitutional disorder. Creasote often succeeds when all other astringents fail; it is speedy in its action; lastly, it does not leave the bowels constipated, unless carried too far in its administration. Occasionally, during its use, it produces a dry, white, filmy state of tongue, and other symptoms of feverishness. When this occurs the remedy must not be continued longer; indeed, it is rarely required after such symptoms, the purging being usually arrested before they appear. With children the dose given must be very small, or such good results will not follow; the one-eighth, one-sixth, and one-fourth part of a drop, is sufficient for babes from one to two years of age. With adults the dose, as an astringent, is from one

and a half to two minims. Mr. Kesteven mentions the value of creasote as an astringent, and supposes that this value depends on the power which creasote has of coagulating albuminous fluids. To this it may be objected, that the quantities of the creasote employed medicinally are not sufficient to produce such coagulation in the intestines. Mr. Richardson assigned to creasote powerful diaphoretic and antispasmodic qualities, and said, that on the vascular system it rather acted as a stimulant than as a sedative. Its power in stopping vomiting depended upon the dose, which should be small. Given in its full dose, as an astringent, it sometimes *excites* vomiting, in which case hydrocyanic acid is usefully combined with it. To lessen its nauseous qualities, it is best to unite it with syrup of tolu and tincture of cardamoms, and camphor julep or water. It may also be prescribed advantageously with the preparations of either when they are indicated.

Gelatinous Polypus from the Ear—New Polypus Forceps. Mr. Harvey exhibited a gelatinous polypus which he had extracted from the ear by means of a new kind of forceps which he had invented for the purpose. He observed that in these cases it was most desirable that the morbid growth should be extracted entire; for if it was broken or otherwise injured in attempts at its removal, it gave rise to much inconvenience, and required tedious and troublesome after-treatment. The forceps which he had constructed, and which he had been in the habit of using for a long time with satisfactory results, were not dissimilar to those of Assalini, but had a somewhat longer blade, were flattened on either side, and terminated with three rows of teeth. The foreign body was firmly grasped by these teeth, and removed by a rotary motion, the instrument admitting of that. This Mr. Harvey regarded as of great importance to the operator on the ear. It was also sufficiently small to admit of being used with a bivalve speculum in the auditory canal, the operator being thus afforded an opportunity of investigating the origin of polypi. The instrument was shown to the Society.

The Affinities and Prophylaxis of Variola. Mr. Dendy read an elaborate communication on this subject.

MISCELLANEOUS INTELLIGENCE.

Homœopathy:—London and Provincial Medical Protection and Benevolent Society. The following resolutions have been unanimously adopted:—

That in the opinion of the Committee of the London and Provincial Medical Protection and Benevolent Society, the practising of homœopathy by legally qualified medical men is calculated to excite ridicule, and thus to lower the profession in public estimation.

As one of the principal objects of this Society is to raise the tone of public feeling towards the profession, the committee feel, that by including among their members professors of homœopathy they would be directly opposing the objects of the Society.

The committee therefore decide, that any member of the profession who professes to practise, or does practise homœopathy, is ineligible to be a member of this Society. The committee are further of opinion, that they could not conscientiously employ the power of this Society in collecting monies from the public for homœopathic attendance, believing, as they do, homœopathic practice to be an entire imposture.

Homœopathy and the St. Andrew's Graduates. On Friday, October 17, the Senatus Academicus of the University of St. Andrew's met for the purpose of conferring degrees on the candidates who have passed through their examinations successfully. There were present seventeen candidates, who signed the subsequent address, which was presented to the rector. The

memorialists were courteously informed that the senate had no power to comply with their request. We are not aware whether the describer of the anatomy of Lucifer and Michael,[1] who is Mesmerist and homœopath to boot, signed the diplomas or not. But this would matter little after the admirable protest of the candidates for the degree.

"*To the Rector and Senatus Academicus, University of St. Andrew's.*

"We, the undersigned Candidates for the degree of Doctor of Medicine in this University, having understood that our diplomas will probably be signed by the Professor of Civil History, who is an avowed homœopathist, and holding as we do the opinion that the doctrines of Hahnemann are utterly irreconcilable with common sense, and with those medical tenets in which we have been educated, and which we trust will ever guide our professional career, respectfully request of the Senatus Academicus that they will adopt such measures as they may deem expedient for the purpose of preventing that desecration of our diplomas which we consider would be inflicted on them if a homœopathic signature were affixed thereto.

John Brown.	George Miller.	T. J. W. Marsh.
John Cowie.	Charles Gibson.	Alex. Scott Fogo.
H. W. Watson.	Thomas Torney.	John F. Gruie.
Edwin Humby.	John Walling.	John Pearson Nash.
N. J. Highmore.	C. D. Kingsford.	John Roulston.
Fred. Goodchild.	Robert Beales.	

"University of St. Andrew's, October 1851." [*Lancet*, 25th October.]

Homœopathy. The Faculty of Physicians and Surgeons of Glasgow, at a meeting held on the 1st September, unanimously passed the following Resolution:—

The Faculty having had their attention called to certain resolutions by the Royal Colleges of Edinburgh in reference to homœopathy, and heard the opinion of their council, to whom the matter was referred at last meeting, do now in conformity with that opinion, express their concurrence in, and approbation of, the view taken by the Royal Colleges as specially detailed in the resolutions of the Royal College of Physicians; but as none of the Fellows or Licentiates of the Faculty, so far as known to them, have hitherto professed or countenanced this system, they consider any further notice of the subject on their part in the mean time unnecessary.

Dr. Henderson of Edinburgh University. In spite of the broad hints which have been given to this Professor, he still clings to his chair. Never did a man hold a more extraordinary position. The Medical Faculty, it seems, have not the power to get rid of him: but the College of Physicians are anxious to expel him from their body, and on the fourth instant they meet to receive the opinion of council as to their possessing the power of elimination. The Medico-Chirurgical Society of Edinburgh proposes, we have heard, at its first meeting to erase his name, and the names of all homœopathic practitioners, from the roll of members.

Office Bearers of the Harveian Society for the Session 1851-52. —Presidents: Dr. J. Bird and Mr. H. Obré.—Treasurer: Dr. J. Ridge.—Honorary Secretary: Dr. R. H. Powell.—Members of Council: Dr. Chowne, Dr. R. Quain, and Mr. H. B. Norman; *ex officio* members inclusive.

New City Lunatic Asylum. The City authorities are about to erect a Lunatic Asylum expressly for the poor of the city of London.

New Infirmary, Torbay. The building—a very handsome one—is so far completed as to afford accommodation for the meetings of the Managing Committee.

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[1] Dr. Macdonald has described the Anatomy of Angels.

General Hospital at Birmingham. On Friday, October 3, an investigation was commenced into certain charges brought by Mr. Gutteridge, one of the Life Governors of the Birmingham General Hospital, against Mr. Alfred Baker, one of the surgeons to the institution. The Earl of Dartmouth was in the chair. The charges were, that Mr. Baker had operated on a patient for ovarian dropsy, without informing her of her risk, and contrary to the opinion of his colleagues; that he had rashly and cruelly tied the carotid artery, and thereby killed the patient, in a case of supposed aneurism of the arteria innominata in an old man: that he had amputated a boy's leg at the hip-joint, instead of at a safe part below. The investigation lasted during seven days, much evidence being called on both sides; and terminated in the drawing up of a report by the Weekly Board, in which they perfectly exonerated Mr. Baker from all the charges brought against him by Mr. Gutteridge. In closing the report, they expressed their "strongest condemnation" of Mr. Gutteridge's conduct, in publishing his attack on Mr. Baker in the form of a pamphlet, before consulting the Weekly Board on the subject of the alleged professional misconduct of that gentleman. They concluded by recording their unanimous opinion, that "Mr. Baker is entitled to retain the full confidence of the governors and subscribers." The whole of the investigation is reported in the *Birmingham Mercury*, for Oct. 18th.

Queen's College, Birmingham: Fellowships. The Queen's College, at Birmingham, has recently obtained powers, under a supplemental charter, to elect as fellows of the college such of its members as may distinguish themselves during their studies, and who subsequently obtain a diploma in medicine or surgery, or become graduates in medicine, law, or arts. The authorities of the college intend to confer this honour, in the first instance, upon such of the earlier members of the institution (the Royal School of Medicine), as the Principal and Council may determine to be eligible; and in accordance with the provisions of the charter, Dr. Roden, of Kidderminster, and Dr. Barker, of Bedford, have been elected fellows of the college. These, with Mr. G. B. Masfen, a Warneford medallist, and resident medical officer of the Stafford Infirmary, are the first three members of the profession selected for this distinction under the new charter. Amongst other privileges the fellows are entitled to vote at all meetings of the governors, to free admission to the medical and general libraries, to the museums, dissecting room, to the lectures of the professors, and to dine in the college hall.

APPOINTMENTS.

Hancock, Henry, Esq., Lettsomian Lecturer on Surgery to the Medical Society of London, in room of Mr. Guthrie, whose term of office had expired.

Ogle, Dr., has been appointed Regius Professor of Medicine at Oxford, in room of Dr. Kidd, deceased.

Pereira, Dr., elected Physician to the London Hospital, in room of Dr. Frampton, resigned.

Winslow, Forbes, M.D., Lettsomian Lecturer on Medicine to the Medical Society of London, in room of Dr. G. O. Rees, whose term of office had expired.

OBITUARY.

Baron, John, M.D., F.R.S., at an advanced age, at St. Margaret's Terrace, Cheltenham, on 2nd October. Dr. Baron was the friend and able biographer of Jenner.

Roe, G. C., M.D., Inspector General of Hospitals, at Madras, on 4th September.

BOOKS RECEIVED.

Bayes on Nervous Affections. London: 1851. Bowman (Wm, F.R.S.) Introductory Address delivered at King's College, London, 1st October, 1851. pp. 32. London: 1851. Bradshaw's Companion to the Continent. [By Edwin Lee.] pp. 408. London: 1851. Carpenter (William B.) Manual of Physiology. *2nd Edition.* pp. 616. London: 1851. Cooper (Bransby B.), Lectures on Surgery. 8vo., pp. 964.

London: 1851. Cullen on the Climate of Sidmouth. *Pamphlet, with Tables.* Sidmouth: 1851. Durand-Fardel. Eaux de Vichy. pp. 235. Paris: 1851. Gairdner (Dr. W. T.) on Bronchitis. pp. 82. Edinburgh: 1851. Symonds on Sleep and Dreams pp. 90. London: 1851. Symonds on Orthodox Medicine. Worcester: 1851. Whitehead on Hereditary Diseases. pp. 351. London: 1851.

TO CORRESPONDENTS.

To the Editor of the London Journal of Medicine.

Sir,—I felt so highly gratified on a perusal of your generous notice of my forthcoming *Lexicon* in the Journal for this month, that I trust you will bear with me in thus expressing my hearty thanks for your liberality. The immediate effect has been an addition of names to my subscription list.

My power to escape from professional duties is at present very limited. Hence the favour conferred by your kind recommendation, and the saving of time and toil effected by the ready cooperation of those who have acted upon it, are greater than can well be supposed.

Again offering grateful acknowledgement to you, and to those you have influenced, I am, Sir, your obliged,

Leeds, 16th October, 1851. R. G. Mayne.

Dr. Dundas' Paper on Quinine in Continued Fever appeared in a recent number of the *Medical Times.*

Dr. Grigor's note has been received; and his request shall be complied with.

Mr. Everest's Sermon: Free Kirk Preachers. A Scottish correspondent wishes us to publish facts regarding certain mystical preachers in the Free Kirk, who espouse homœopathy from house to house, and teach other kindred follies of German origin. We do not feel that it is within the province of this Journal to enter upon such matters; but if the rumours regarding the homœopatic dealings of the Rev. J. Wright of Nenthorn, be so current as stated to us, there is an ecclesiastical tribunal not likely to flinch from an inquiry into their truth or falsehood. We beg to inform our correspondent that Mr. Everest's Sermon is published (price one shilling) by Aylott and Jones, 8, Paternoster Row. Ample specimens of this production have already been laid before our readers. [*Vide* p. 872-874.] His Letter to Dr. Cormack is nearly as striking an example as the Sermon, of the impious and raving character of homœopathy. At p. 11 of the *Letter* we read as follows:—"What is the law of cure? What is the formula for it? What is the general expression for it? Is there no such thing? From the highest point to which balloon ever reached, fling forth a stone into space, and I will give you an expression by which you may find its place to a foot at any moment of its fall. $S = m\,T^2$. So the Almighty does His work. Now, Dr. Rose Cormack, how do you do yours? Produce your rule!"—No better idea can be formed, by a disciplined mind, of the impiety and absurdity of homœopathy than by a perusal, (without note or comment), of the *Organon* of Hahnemann and the writings of Mr. Everest, his friend and chief apostle; especially, when it is borne in mind, that the last production of Mr. Everest has been much lauded, and heartily adopted by the *Homœopathic Times*, the weekly organ of the Quins, the Hendersons, the Calvert Hollands, and the Ransfords. Mr. Everest wishes to know where such "naughty words" as *lie* and *blasphemy* can be found: he cannot fancy where a "clergyman's son" learnt them: but he ought to have known that these terms are often used in a very plain-dealing book called the Bible, *where a lie is called a lie, and where blasphemy is called blasphemy.* Surely a clergyman ought to be as well acquainted with this book as a clergyman's son. We had intended to review Mr. Everest's Sermon and Letter, but from the abundance of scientific matter now before us it is impossible for us to do more than call attention to them, as exhibiting the worst phase of homœopathy,—as showing that it is now preached as a doctrine of the Bible by clergymen of the English Church, without any episcopal interference. Our colleges may be shamefully remiss in repudiating error; but they are fully equalled in laxity of doctrine and want of discipline by the Bishops. The heretical *isms* in the Church, are at least as numerous as our charlatanic *pathies;* and the proverb—"*doctors differ*"—is quite as applicable to clergymen as to physicians.

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ORIGINAL COMMUNICATIONS.

ON THE HEALTH OF LONDON DURING THE SIX MONTHS TERMINATING SEPTEMBER 27, 1581.

By JOHN WEBSTER, M.D., F.R.S., Fellow of the Royal College of Physicians, Consulting Physician to St. George and St. James's Dispensary, etc.

Considering the recent enormous and constantly changing population collected in London during the period to which this report refers, from all parts of the empire, and from foreign countries, it is particularly interesting to ascertain, how far the sanitary condition of the capital manifested any difference from that of the corresponding period of previous or ordinary years? The inquiry is highly important, alike to the political economist and to the physician. With the view of supplying evidence whereon to found deductions respecting several vital questions, I now proceed, in accordance with the method I have hitherto adopted; first, to enumerate the gross amount of deaths recorded throughout the metropolitan districts during the half year ending the 27th of last September; and afterwards, to give a few details illustrating the varied mortality produced by particular maladies, in order thereby to point out wherein recent results differed from, or resembled, those met with during the parallel six months of the previous year.

The health of the metropolis during the past summer and autumn, although in some respects not so satisfactory as throughout the same months of the year 1850, has not been remarkable either for the severity of prevalent diseases, or on account of its aggregate mortality. During the six months terminating on the 27th of last September, the total deaths amounted to 25,980, contradistinguished to 22,816 during the parallel period of 1850, thus making an increase of 3,164. However, it should be remembered, the majority of deaths took place during the first three months of the recent half year, when 1,845 more deaths were recorded than the number which occurred during the same quarter of 1850; but the excess was only 148 beyond the number

reported throughout the parallel season of 1848, whilst it was not more than 85, if compared with the second quarter of 1849, notwithstanding that the latter was the great cholera year. When reflecting upon these varied statements, it should be always recollected, that during the months of April, May, and June, of the current year, the metropolitan population became enormously augmented, whilst many of the assembled strangers were placed, unavoidably, under unfavourable mental, and physical influences. The principal augmentation in the rate of mortality occurred during May, when upwards of half the additional 1,854 deaths took place, the excess being 959 fatal cases beyond the amount reported during the parallel month of the former year; hence, indicating that May was the most sickly portion of the entire half year referred to in the present report.

Throughout July, August, and September, the number of deaths, from all causes, was likewise somewhat greater than in the same quarter of 1850, the increase amounting to 1,309 cases; whereas, if the same quarter be compared with the same three months of 1848, the returns give 616 fewer deaths during the recent season. During the second and third quarters of 1848, the deaths amounted to 26,448, which makes 468 more than in the same months of 1851; and as the excess was 14,137 in the great cholera year, or 1849, the public may well rest satisfied with the recent healthy state of the metropolitan population, although its aggregate mortality exceeded that reported in 1850. Instead of experiencing famine, plague, pestilence, riot, rebellion, and crimes sufficient to shake society to its centre, as many predicted, nothing of the kind has occurred; for which we assuredly have much reason to be grateful to Providence.

Diseases which have lately Exhibited a Diminished Rate of Mortality. Several diseases have proved rather less fatal than in the parallel six months of 1850. From scarlatina, 460 persons died, in place of 550 deaths during the parallel six months of the previous year, thereby making a decrease of 90 fatal cases; from erysipelas, the deaths were 150, instead of 168; by apoplexy, 606 against 618; from dropsy, 362, in place of 382; from influenza, 115, instead of 123; from enteritis, 187, in place of 193; from hepatitis, 95, against 107; from peritonitis, 95, instead of 112; from nephria, 57, against 67; from ovarian dropsy, 24, in place of 35; from aneurism, 35, instead of 44; from hæmorrhage, 97, in lieu of 106; and from rheumatism, 102 fatal cases were recorded during the recent six months, against 110 met with in the similar two quarters of the former season.

To the different maladies now enumerated as prevailing less fatally, it is gratifying to add two affections, not only on account of the diminished mortality they produced, but also as leading to important conclusions respecting the improved habits of the general metropolitan population. The causes of death now alluded to, are intemperance and delirium tremens. From the first, 29 persons are reported to have died instead of 39 during the parallel six months of 1850; and delirium tremens cut off 67 individuals, contradistinguished to 96 during the previous period. Statements like the above are exceedingly gratifying, and may be justly brought forward as good evidence that sobriety characterised the immense masses of people frequenting London during

the past season. Taken in conjunction with other facts not now alluded to, as it would be out of place to bring them under discussion, although sufficiently obvious, it will at once be acknowledged, that, so few persons having died, comparatively speaking, from excess in ardent spirits, is an indication of considerable social improvement.

Diseases which have Exhibited an Increased Rate of Mortality. Several maladies have been both more prevalent and more fatal than during the summer and early autumn of last year. This remark applies especially to infantile complaints, and to several affections of the organs of respiration.

Small-pox occupies a most prominent position in this mortuary scale, seeing that the deaths by that truly pestilential malady were last season more than double those in the previous period, 452 persons having recently died from variola, in place of 212 fatal cases of the same complaint during the parallel two quarters of the preceding year. In reference, also, to the greatly augmented mortality from small-pox, it ought to be specially mentioned, that nearly the whole deaths occurred in patients under 15 years of age; 392 out of the whole 452 reported being within that limit, and of these, it should be stated, a large proportion were very young children. An immense majority of those so affected were unprotected by vaccination; and numerous parents had even obstinately refused to avail themselves of the protective influence of cow-pock, notwithstanding they were urgently solicited by friends and medical men to have their children vaccinated. It is most lamentable to find so much prejudice and ignorance still prevailing amongst the lower ranks in regard to the invaluable benefits which Jenner has conferred upon the community.

Occasionally, individuals are attacked by secondary small-pox; and death has thereby supervened in after life, although the party had been vaccinated during infancy. Similar results sometimes follow natural and inoculated variola; but all cases of secondary small-pox being exceptional, they cannot outweigh the many millions of instances in which vaccination has proved protective.

However untenable several of the objections which some individuals continue to entertain against the efficacy of vaccination may appear, such prejudices become excusable, to a certain extent, when the limited opportunities are remembered, which these parties have enjoyed of obtaining correct information respecting cow-pock; as also their defective general education. Uneducated persons belonging to the labouring classes, especially in the rural districts, deserve pity rather than censure, when obstinately objecting to allow their children to be vaccinated, and are certainly much less blamable than those benighted members of the middle and upper ranks of society, who patronise prevailing quackeries, whether homœopathy, Mesmerism, hydropathy, or the use of secret remedies. To find educated men and women, arrived at the years of discretion, who have had ample opportunities of acquiring knowledge, and of exercising their intellectual faculties, believing in the wonderful stories palmed upon credulous imaginations by peripatetic lecturers and pseudo-philosophers, is far more strange than to meet with uneducated people doubting the prophylactic powers

of vaccination. The latter should be commiserated, whilst the former deserve only condemnation.

From measles, a considerable increase in the rate of mortality has been also observed, 755 deaths from that complaint having recently occurred, against 410 fatal cases during the parallel six months of 1850. From convulsions, 955 individuals died, in place of 839 during the previous period. Hydrocephalus also proved fatal to 812 persons, instead of 677; whilst bronchitis, always a serious disease in very young, as in persons of advanced age, caused death to 1,330, contradistinguished to 1,076 during the similar two quarters of the former year. Hooping-cough likewise proved more destructive than previously; 1,094 deaths having taken place from this disease, instead of 706 recorded in the two previous parallel quarters.

Phthisis has proved more deadly than in the former summer and autumn; 3,498 deaths occurred from that malady during the six months embraced by the present report, instead of 3,056 in the two similar quarters of the previous year, giving an excess of 442 deaths, or an increase of nearly 15 per cent.: from pneumonia 1,387 died, instead of 1,151, being an excess of 236 deaths. Typhus has likewise proved more fatal, 1,055 deaths having been reported, instead of 900 during the second and third quarters of 1850. Diseases affecting the abdominal viscera have exhibited a larger mortality during the present than in the corresponding six months of the previous year. For instance, diarrhœa carried off 1,647 persons, in place of 1,361 in the former season; from cholera, 191 patients died, instead of 96; from liver disease, 283, in lieu of 253; whilst 86 deaths were reported from jaundice, in place of 75 in the previous period; from inflammation of the brain, 286 persons lost their lives, instead of 268; epilepsy recently carried off 168 patients, instead of 132; and lastly, from scrofula, 210 deaths were recorded, against 157 met with in the former half year.

Notwithstanding repeated allusions in former reports to the number of infants who annually lose their lives from being deprived of their mothers' milk, and in spite of frequent remarks respecting a practice which produces most disastrous consequences, the evil continues to prevail quite as much, if not more extensively than before. This truth is clearly demonstrated by the fact, that 119 deaths occurred from the want of breast-milk during the last six months; whereas, the total number of infants who sank under that privation was 89 in the parallel two quarters of the preceding year; giving an increase of 30 deaths during the more recent period. Statements like the above are by no means creditable to the parties concerned, seeing that they indicate the continuance of a custom producing most serious results, which the laws both of nature and common sense strongly condemn. However agreeable the practice may prove to certain fashionable mothers, anxious to avoid the trouble of suckling their own offspring, or profitable to hireling parents, induced by lucre and additional physical comforts, it is not less true that their respective infants frequently become victims of neglect and privation. This picture is not overdrawn, but forms a true representation of the evils occasioned by employing wet-nurses; therefore the system ought to be discountenanced—not patronised by wealthy and aristocratic members of society.

Diseases Exhibiting a nearly Uniform Rate of Mortality. Notwithstanding the immense metropolitan population, and the various causes inimical to health, which are frequently, but also irregularly, in operation, it is both curious and instructive to notice the singular uniformity often observed to prevail, in regard to the number of deaths produced by certain diseases during consecutive years, and even under apparently adverse or opposite circumstances. The facts about to be detailed in illustration of similar peculiarities are interesting; and however impossible it must appear for any person to foretell the number of individuals who might be carried off by particular diseases, it nevertheless can be safely asserted, that the mortality produced by several complaints is often remarkably uniform. On this point, the experience obtained during last summer and autumn is instructive, especially as the results noticed coincide, in some respects, with previous observations. For instance, during the six months terminating on the 27th of last September, from paralysis, 506 deaths occurred, instead of 507 in the parallel quarters of the preceding year; from cancer, 451 fatal cases were reported, against 457; from asthma, 217, in lieu of 210; from disease of the kidneys, 143, against 142; during child-birth, 107 women died, instead of 116; whilst from hernia, 69 fatal cases were recently reported, contradistinguished from 62 in the six parallel months of the previous season.

Besides the preceding illustrations of uniformity in the number of deaths produced by certain diseases throughout consecutive years, it also deserves mention, that 53 individuals died insane during the last six months, in place of 51 in the former season. Further, 15 deaths were recorded from stone, against 13; and of diabetes, the fatal cases amounted to 20, instead of 18 met with in the previous period. Similar remarks equally apply to diseases affecting joints, from which causes 87 persons recently died, in place of 91. Again, from affections of the uterus, 89 deaths occurred, instead of 82 in the former half year. From heart complaints, which proved fatal to 830 persons during last season, 801 were reported in the parallel six months of 1850. Regarding diseases of the heart, it deserves being mentioned as an interesting fact, that a large proportion of the 830 fatal cases took place in patients at the prime of life, whilst very few deaths by the same class of affections were met with previous to puberty. This opinion is shown to be well founded by the fact, that only 34 individuals died from heart-disease under the age of 15, whereas 494 deaths were reported in persons from 15 to 60, whilst the remaining 302 fatal cases occurred in patients who had passed the latter term of life. According to these data, medical practitioners may therefore very justly assert, that diseases of the heart are more common during manhood than at any other period, whilst they prove fatal in greater number to parties about the prime of life, than to youths or children.

Age of Individuals who have Died. In connexion with repeated statements contained in previous reports, I have again to request special attention to a circumstance, which, although by no means novel, still appears astounding; namely, the fact, that almost one half of the whole deaths recorded throughout London during the last six months,

occurred in young persons, many being even children or infants. This conclusion is based upon the return of ages stated in the mortuary reports, from which it appears, that not less than 12,651 cases out of 25,980 deaths recently registered, took place in patients under their fifteenth year; 8,263 from that age to 60, or in the prime of life; and 4,914 in parties who had passed their grand climacteric; thus leaving only 152 persons whose exact ages were not ascertained. That so large a proportion as nearly fifty per cent. of the entire mortality recently met with in the metropolis, should have taken place solely amongst the juvenile, deserves most serious attention on the part of physicians and philanthropists, in order to ascertain how premature mortality may be stayed or corrected. That physical defects, and constitutional tendency to disease in certain individuals, greatly contribute towards augmenting the number of deaths amongst the younger portion of mankind, cannot be questioned, knowing that these powerful influences are too often in operation. Independent, however, of such potent causes of disease and consequent death, no medical observer can deny, that improper feeding, defective clothing, and a total disregard of many hygienic rules essential to the preservation of health, besides the frequent neglect of ordinary prophylactic measures, whereby some of the existing evils might be mitigated, have all very materially contributed to produce the lamentable concatenation of cause and effect now briefly delineated. Without attempting to discuss on the present occasion these important questions in the manner they deserve, I will only now remark, that prejudice, and long-established usages fostered by ignorance, not only exercise great influence in perpetuating existing evils, but they often act as repulsive antagonists to progress and improvement, besides being frequently arrayed in opposition to all change, even when recommended by reason or experience. Notwithstanding these obstacles, knowing how essential it is in the cure of disease, or in the abatement of any social mischief, first to learn its cause and nature, prior to settling treatment proper to pursue, I have been induced again to notice the excessive mortality among London children, in order that professional men may further investigate the subject, and so suggest effectual means to remove, or alleviate, similar calamities.

Mortality among the Pauper Population. Somewhat analogous to the observations previously made, the total number of deaths recorded throughout all the charitable institutions of London during the last half year, again constitutes a considerable proportion. Amongst the 25,980 fatal cases reported in the six months terminating on the 27th of last September, nearly one-sixth, or 3,959 deaths took place in the workhouses, asylums, prisons, and hospitals, thereby giving 15·23 per cent. of the aggregate mortality, of whom many, it may be added, were medically treated and otherwise supported, during their last illness, at the expense of others, or by the general community. Another important matter regarding the eleemosynary part of the population, who recently died within the walls of public institutions, also deserves particular notice,—namely, the disparity existing betwixt the number of male and female inmates. The deaths amongst the former class predominated considerably; seeing that 2,319 out of the 3,959 re-

corded in all these establishments belonged to the male sex, thereby leaving 1,640, or about two-fifths, to the other, which gives an excess of 679 deaths, or 41·40 per cent. amongst the male residents.

Having very fully discussed in my former reports the mortality met with at various charitable institutions of the metropolis, it seems wholly superfluous again to enter upon such subjects at any length, more especially as there is ground for believing that detailed statements of the most interesting agenda, recorded at several public charities, will be eventually published by delegated official authorities. In the confident hope that such expectations may be speedily realised, and believing farther, that authentic statements of this kind will prove both instructive to the medical profession, and through them, to the public at large, I shall confine all present remarks respecting these institutions, to a few cursory observations, illustrative of the recent mortality recorded in the workhouses, prisons, and general hospitals of London; from which inquirers, taking an interest in similar questions, may be able to deduce their own inferences, and also to compare them with previous statistical observations.

Workhouses. Upwards of half the aggregate deaths recorded in the public medical institutions of London during the last six months, took place amongst the residents of workhouses, the number being 2,216 out of the total 3,959 deaths reported. Amongst these, it should be likewise stated, that the majority were male patients, the relative proportion being 1,125 males, to 1,091 females. If the 2,216 deaths now mentioned to have taken place in workhouses might be adopted as a criterion of the recent state of public health, it may be inferred, with some show of reason, that as one-eleventh of the total mortality recently recorded in London, supervened amongst paupers belonging to the different parishes, perhaps the same proportion of sickness occurred elsewhere as in these establishments. At the same time, if the above mortality be compared with the amount reported from London workhouses during the six months immediately preceding the two quarters terminating on the 27th of last September, less serious disease has of late generally prevailed, seeing the deaths have been actually fewer than in the former half year, when 2,564 persons died in parish workhouses and infirmaries, being an increase of 348 fatal cases. This result was doubtless owing, in great part, to the milder temperature of summer, compared with the cold weather of winter, which always proves inimical to the health of old persons, as also to children; and as many of the former class become inmates of these eleemosynary institutions, the proportion of deaths therein is usually considerable.

Metropolitan Prisons. The health of prisoners confined in London gaols has been recently exceedingly satisfactory, and quite as much so as on any previous occasion; only 32 persons having died throughout all the public establishments of that description in the metropolis during the last six months, of whom 27 were male, and only five female inmates. During the parallel two quarters of 1850, the total deaths in the same prisons were, however, 44, thus making a diminution of 12 cases in the last half year; and as the mortality

during the six months ending on the 29th of last March, was only 27, or five fatal cases less than in the recent period, no doubt can be entertained that London gaols are generally salubrious, the single exception being the Penitentiary. This conclusion is proved to be correct, seeing that eight of the 32 deaths recently reported from all the London prisons, occurred in that establishment; and as 10 of the 27 fatal cases also met with in the various gaols during the half year immediately preceding, took place in this prison, nearly one-third of the whole deaths, or 18 cases out of 59 recorded throughout the entire twelve months, were inmates of the Penitentiary, such statements corroborate the inferences now enunciated. The salubrity of most is very well known; and individuals whose health was bad on committal, have often become improved in condition after a short residence in prison. Indeed, a facetious physician is reported to have said, in reference to similar beneficial results, that idle and luxurious invalids having their constitutions affected from irregular habits, would frequently find it ameliorated by adopting prison rules, whilst they also had the same "change of air". The observation coincides with experience, and indicates the observer's shrewdness, as well as his knowledge of human nature.

General Hospitals. Having adverted at considerable length in my last report on the health of London, to the movement of patients recorded in these public charitable establishments, I do not at present propose again to discuss this important subject, beyond making a few cursory remarks in reference to the mortality met with amongst the patients. Compared with the parallel two quarters of the preceding year, the number of deaths reported from all the general hospitals of London, is rather greater in the recent, than in the previous parallel season; seeing the aggregate fatal cases amounted to 1,051 at the above institutions during the half year ending on the 28th of September 1850; whereas, from the same charities, 1,073 deaths were recently reported. However, in the six months terminating on the 29th of last March, the total mortality was greater, as 1,111 patients then died in the different hospitals. This result was somewhat analogous to the statements already reported from workhouses, and most likely depended upon similar influences, viz., the low temperature and severe weather of winter compared with summer, whereby the latter season proved more salubrious to inmates of the various charities, whether general hospitals or parochial infirmaries.

Another peculiarity in reference to the recent mortality reported from hospitals also deserves notice, namely, the large proportion of male patients who died in the above institutions, compared with females, nearly two-thirds of the whole deaths recorded having been of the former, and only about one-third of the latter sex, the exact numbers being 664 male, and 409 female patients. These facts therefore prove, that more disease, and certainly a greater number of severe accidents usually occur among the male population of London, resorting to general hospitals for relief, during sickness and physical injuries, than among its female inhabitants, although the latter are most numerous. But this point having been investigated in a former report, and conclusions having been deduced from the official returns of six

general hospitals, it seems unnecessary again to bring forward additional evidence upon that subject.

Besides the characteristic feature now pourtrayed respecting the preponderance of male patients in metropolitan hospitals, it also deserves remark, that the first three months embraced by the present report seem to have proved more unhealthy to inmates of these institutions than the latter quarter, comprising July, August, and September. During the former period, or throughout April, May, and June, the aggregate deaths in all the general hospitals amounted to 577, consisting of 366 male, and 211 female patients; whereas in the latter three months, the total number of fatal cases reported from the same charities, fell to 496, of whom 298 were male, and 198 female inmates; thus giving a diminution of 81 deaths, or one-seventh in favour of the more recent quarter. Such statements become more significant, when readers recollect that London contained a larger population last autumn than at any previous epoch; and as hospitals would be the most likely refuge of strangers, besides other persons meeting with accidents in over-crowded streets or elsewhere, the fact of fewer deaths having taken place at these institutions during the last three months, than in the preceding quarter, appears presumptive proof that casualties of all kinds were then less numerous. Taken cumulatively, but especially if viewed in reference to the existing population, the diminished rate of mortality in general hospitals must be held as highly satisfactory; and although the total deaths, from all causes, exceeded by 1,359 cases the amount recorded during the parallel three months of 1850, nevertheless the metropolis was certainly not insalubrious; on the contrary, considering the actual number of inhabitants, it was healthy.

Before taking leave of the eleemosynary institutions, as the subject may be interesting to many readers, I would again revert to the small number of deaths reported from the various charities, in order to contrast the results with those observed in Parisian establishments of the same description. In the French capital, although the total population ranges less than half that of London, the number who annually die in the workhouses *(hospices)*, and civil and military hospitals of the former city, is nearly treble the ratio of the latter, if viewed in reference to the number of inhabitants. Take, for illustration, 1849 and '50; seeing those years supply the most recent official returns now published upon similar subjects. During 1849, exclusive of the 19,188 fatal cases of cholera, which then prevailed in Paris, 9,871 persons, out of a gross mortality of 29,985, from all other causes excepting cholera, died in public institutions, thereby showing, that nearly one-third, or 32·94 per cent. of the total mortality in the above city, took place amongst the poorer classes. Again, throughout 1850, notwithstanding the aggregate deaths in Paris were under the previous year, being only 27,856 from all causes, still so many as 10,079 patients actually died in the public medical establishments of the French capital, thus making upwards of one-third, or 36·14 per cent. of the entire mortality who were inmates of such establishments at the period of death, the remaining 17,777 having died in their own domiciles. These instructive data indicate a very different state of matters from the ordinary occurrences recorded in London, where,

instead of only 64 persons in every hundred dying at home, as in Paris last year, the proportion was about 84 per hundred. Other points possessing much interest, in reference to the different rate of mortality recorded in the two capitals now compared, might be discussed; but I refrain, lest I exhaust the reader's patience.

Concluding Remarks. On reviewing the various facts contained in previous paragraphs, and considering that the 25,980 fatal cases reported, during the six months terminating on the 27th of last September, ought not to be regarded as exclusively representing the ordinary mortality incident to the 2,400,000 inhabitants usually living in London, but, in reality, appertaining to a much larger number of human beings liable to attacks of disease, at the time congregated within the British metropolis, the public have much reason to feel grateful that the number of deaths recently recorded was not more considerable. Another instructive point should be likewise borne in remembrance, namely, that the causes whereby the late increased mortality in great part arose, were infantile complaints, the victims being chiefly infants and young children:—not adults resident in London, or strangers attracted thither by the Great Exhibition, of whom the great majority were men and women. This reasonable inference becomes more significant, seeing that several determined objectors to the recent gathering of nations had gravely asserted, that the large assemblage of persons who would thus be brought in contact, must produce every imaginable kind of disease and misfortune.

In support of the view now promulgated, respecting the partially increased number of deaths recently recorded, compared with the amount met with during the parallel two quarters of last year, it will suffice to state, that the excess of fatal cases from hooping-cough having been 388, from measles 345, from diarrhœa 286, from hydrocephalus 235, from small-pox 240, and from convulsions 116, during the last six months; it thus appears that more than half the total excess, or 1,510 cases were produced by the half-dozen complaints above mentioned. Besides this peculiar feature in infantile diseases, it may be added, that although diarrhœa cannot be classed under that division, nevertheless, amongst the 1,649 deaths produced by it, 1,354 of the cases occurred in patients previous to puberty, many being infants.

Statisticians, fully competent to form an opinion upon the subject, having estimated that 3,000,000 individuals, at least, beyond the usual resident population, actually visited London during the six months embraced in this report, the recent amount of mortality must have been thereby materially influenced; although the actual increase was not at all commensurate with the augmented number of residents, nay, speaking comparatively, respecting the actual population at the time, the ratio of deaths was rather below that of many ordinary seasons. Applying this mode of reasoning to the subject under discussion, let us suppose that an army of 50,000 men having lost, during six months, a certain number by ordinary complaints, were augmented to 100,000 rank and file, of course double the number of deaths would still give the same rate of mortality; but if the increase in mortality was only one-half the previous amount, then the actual ratio of deaths had diminished. Again, take a fleet having a certain number of sailors on board; if so

many died within a limited period, the mortality would be relatively the same, should double the number of deaths be registered after the crews had become, by new arrivals, twice as numerous. Were either of these contingent results to arise, there would be nothing extraordinary in such occurrences to excite astonishment. Instead, therefore, of assuming the late augmentation of deaths throughout the metropolis as any evidence of its recent insalubrity, the facts seem clearly to warrant an opposite conclusion. Irrespective of the great accession of inhabitants, if the total fatal cases recorded in London during the last six months, be compared with the amount reported in the two parallel periods of 1847 or 1848—the year 1849 being exceptional, as the cholera then prevailed epidemically—the average rate of mortality will appear nearly alike; seeing that the total deaths during the second and third quarters of 1847 were 25,548, or only 432 fewer than last season; whereas, in the six similar months of 1848, when the gross mortality amounted to 26,453, there occurred an increase of 473 fatal cases, notwithstanding the ordinary population was much less considerable than recently.

Unquestionably, the residents of the metropolis never became doubled in amount at exactly the same period, the additional visitors being distributed over the whole six months, especially during the last quarter; nevertheless, as all were under nearly the same influences, and equally liable, or exposed to attacks of disease, the aggregate number of persons present must be taken into calculation, when estimating the average rate of mortality. It has also been shown, in a previous paragraph, that the recent actual augmentation in the number of deaths was almost exclusively confined to children, and did not materially affect the adult population; so far from the vast crowding together of human beings in London, from all districts and climates, having produced deleterious effects upon their health, the very reverse supervened. Consequently, when we cast a retrospective glance over many remarkable features characterising the events of the last six months, amongst various subjects worthy of special notice, none seems more peculiarly instructive and impressive than the remarkable salubrity of the season, the absence of any severe epidemic, and the small amount of severe accidents. These reflections ought to make men grateful; and as doubtless some of the results now described were greatly promoted through the precautions taken by public authorities, the sanitary measures previously adopted, and the admirable spirit which animated all parties frequenting the metropolis, every recollection of the Great Exhibition and the recent concourse of nations cannot but prove agreeable, and ought to excite within us deep gratitude to the Almighty Ruler of the universe.

24, Brook Street, November 1851.

A CASE OF CHOLERA TERMINATING WITH PERICARDITIS.

By EDWARD BALLARD, M.D.Lond., late Physician to the St. Pancras Royal General Dispensary, etc.

Case. Mr. C—, aged 30, residing at Retford, by occupation a cabinet-maker, requested me to visit him at seven P.M., September 5, 1849, in consultation with Mr. W. Gylby, his ordinary medical adviser. That gentleman informed me that the patient, although well capable of following his employment, did not enjoy habitually robust health, but that there had at no time been any indication that he suffered at all from renal disease. It appeared that, on September 4th, he was occupied for four hours in a house where some persons had died of cholera, (located there by several intolerable nuisances around it), in measuring one of these persons for a coffin, etc. He was of a timid disposition, and had an impression on his mind, that he should be attacked by the disease. In the course of the morning of the 5th, he was seized with diarrhœa; and at 2 P.M., after having eaten his dinner, vomiting and epigastric pain supervened. At the time I saw him, he was discharging frequently the regular choleraic evacuations, and shortly began to suffer from cramps in the legs and abdomen. He was ordered acetate of lead in pills, with acetate of morphia; flannel bandages were placed upon the legs, and he was "packed" in blankets. The pills having been vomited, calomel was substituted for the lead, and effervescing draughts, with hydrocyanic acid, were given.

September 6th. We found that the vomiting and purging had been but trifling during the night, his skin was sweating abundantly, and the cramps had been less frequent. His hands, however, were purple, shrivelled, and cold; voice feeble; pulse small, and intermitting at each third beat; breath cool, but not so cold as is often observed; he was complaining much of dyspnœa; urine quite suppressed; cold water, if drank, caused a return of the vomiting and cramps. Six ounces of blood were taken from the arm, with immediate relief to the dyspnœa, and return of regularity with increased fulness of the pulse. In the evening, he expressed himself much relieved; his voice was stronger, and breath less cold. The blood drawn in the morning presented a large coagulum of deficient firmness.

September 7th. He said he felt better. There had been no vomiting and no cramps, but I noticed that he was very restless, his eyes had an unnatural appearance, and when a question was put to him, he appeared to hesitate, as if in meditation upon it before giving his answer. Mr. Gylby informed me, that there had been a *bilious evacuation* from the bowels. In the afternoon of this day, some return of dyspnœa had induced Mr. G. to apply a blister to the epigastrium, which relieved it greatly.

September 8th. Mr. G. informed me that the patient had "vomited a quantity of pure bile", and that he had had some interrupted sleep during the night, and had passed another "bilious stool". The blueness had disappeared from the hands, and they were warmer; but there had been delirium during the night and this morning. The restlessness had remarkably increased; he was tossing about in all directions upon the bed, and there was the same expression of the eyes as on the day before. From time to time he drew a deep sigh. The pos-

sibility of pericarditis suggested itself to my mind, as explanatory of the observed phenomena, which I had noticed under similar conditions before. On examination of the cardiac region, which I consequently made, I found the first sound of the heart defective, but not quite lost; and accompanying the second, and extending partly into the interval, there was a *very obvious friction sound*, audible over the situation of the base of the heart only. The heart's dulness on percussion was not increased. Six leeches were applied over the situation of the friction sound and followed by warm poultices; and his calomel and morphia were continued. Some carbonate of ammonia had also been added to his draughts. When I visited him in the after part of the day he was asleep, and had passed another bilious stool. The evacuations were all thrown away prior to my visits, probably from dread of infection.

September 9th. I was informed he had slept soundly during the night, and had passed no urine, although I had directed that any he passed should be preserved for examination. I found him in the morning in a state of stupor, from which he could only be partially roused; but there was, notwithstanding, the same tossing about the bed from one side to the other, and throwing about of the arms, as noticed before. The pulse was imperceptible at the wrist, *and the friction sound was double, and extended over the whole cardiac region.* At noon, he died. An examination of the body was not allowed.

Remarks. The principal interest which attaches itself to this case is pathological. A patient, in progress of recovery from the collapse of cholera, dies with the physical signs of pericarditis strongly pronounced, and with symptoms referable to the cerebral faculties, such as occur sometimes in that disease, and in connexion with uræmia. There are two matters to be regretted: one is, that the evacuations of urine (if they ever occurred) were allowed to be mixed with the stools, and so systematically thrown away; and the other, that there was no opportunity afforded of discovering, after death, the condition of the kidneys. Thus, therefore, we cannot, on the one hand, positively affirm that urine never was secreted, or being secreted, that the amount of urea discharged was defective; or, on the other, be certain that degeneration of the kidney had not been present prior to the choleraic seizure. These are points to which it is fair and proper we should not close our eyes. Still, it is to be recollected, that chemical analysis has shown that an inordinate quantity of urea in the blood is a condition which is remarked in the reactive stage of this disease, as well as in renal degeneration; that there was no history of renal symptoms prior to the occurrence of cholera; and that the pericarditis occurred just at that period when it was to be expected that uræmia, as the result of the cholera, would be most intense, and consequently most likely to produce its poisonous effects. Hence, even if renal disease had been proved to be present prior to the attack of cholera, it would still have remained in the highest degree probable that the latter, by augmenting the uræmia, had aided the former in poisoning the patient's blood. This at least may, I think, be fairly concluded from the case under consideration. Taking this view of the matter, I need scarcely say, that the pathological interest of the case lies in its connexion with the results of the valuable researches of Dr. John Taylor on the causes of pericarditis.

42, Myddelton Square, October 8, 1851.

DEPRESSION OF THE UPPER AND ANTERIOR ASPECT OF THE THORAX,

CONSEQUENT UPON POSTURE IN OCCUPATION, SIMULATING THE DEPRESSION OF PHTHISIS.

By S. SCOTT ALISON, M.D., Licentiate of the Royal College of Physicians of London.

Some years ago, a man, about 40 years of age, requested my advice for severe pectoral symptoms, prostration of strength, and extreme emaciation. He believed himself to be suffering from consumption. His breathing was laboured; he spoke with evident difficulty, and coughed almost incessantly. He expectorated a great deal, and perspired much: in short, he ran over the usual symptoms of a man in the last stage of phthisis.

On his drawing off his shirt, in order to my making a closer examination, I perceived that the forepart of the three upper left ribs was much depressed, and that, during inspiration, they failed to rise as in the healthy chest. So far, this corresponded with, and corroborated the idea of the patient himself, that his disease was consumption. But going further, I found that the cardiac and vocal resonance was not increased; that percussion elicited no materially dull sound; and that vesicular respiration was going forward, though mixed up with large mucous râle. The other side of the chest was healthy in form, and likewise in sound, except that rhonchus in the larger air tubes was extensive. With these encouraging facts, I ventured to disregard the flattening of the left side, and assured the patient that his disease was not consumption. The treatment adopted was what is usual in such cases of bronchitis, and included counter-irritation. The more acute symptoms passed off, and in some months the patient was restored to his usual health.

I had the curiosity to ascertain the subsequent history of this man, and I therefore visited him within the last few days. I found that he had some two years back discontinued his occupation, that of a cabinet-maker, in consequence of his health being delicate, and had since employed himself at a lighter business, requiring less exertion and stooping. He still coughed a good deal, and felt weakly, but he had as much flesh as when I discontinued seeing him some four years ago. I requested to be allowed to see his chest; and though there was evidently some flattening on the left side, it was materially less than formerly,—a change which I attribute to the discontinuance of his former occupation. He had formerly been employed the greater part of the day at a low bench, sawing and planeing, with the chest inclined forward, and to the left, and with the right shoulder more elevated than the left. This had been his daily occupation from boyhood; and it had affected him doubtless the more readily, from his constitution being delicate, from his osseous frame being unusually slight, and from his habits being somewhat irregular. Throughout the chest vesicular respiration was established, and any little mucous râle to be heard was confined to the right mammary region, and was not to be made out in the region of the flattened ribs.

Since my attention was drawn by this case to the depression of the

upper and forepart of the chest by posture in occupation, regarding it with some interest in relation to the flattening caused by phthisis, I have observed the same alteration in form, produced by posture in other patients; but guided by the case related, I have avoided confounding it with the same alteration dependent upon pulmonary disease. In some cases, the flattening is found on the right side; in some on both sides, including the upper portion of the sternum. When the entire upper portion of the chest is greatly depressed, which is the case particularly in those workmen who are employed in drilling wood on a very low bench, and who increase the force of the left hand holding the drill, by pressing it with the under surface of the lower jaw, and the upper portion of the front of the chest, the thorax at its back aspect becomes gibbous, the dorsal vertebræ forming a segment of a circle, while the cervical and lumbar vertebræ remain in a comparatively straight line. When the depression takes place on one side, for the most part the spine is somewhat distorted, the dorsal vertebræ forming a curve whose convexity is directed to the opposite side. For the most part, in proportion to the flattening or depression of one side, there is observed a greater fulness of the opposite side of the thorax.

Such alterations in the form of the chest, consequent upon posture, are in themselves significant of little or no internal injury. In such cases, the internal organs present no signs of alteration in their structure, very little of disturbed function, and for the most part, evidence only of slight displacement. The bodies of men whose chests have been very considerably altered in form have been opened, and the thoracic viscera have displayed no signs of morbid alteration. I have carefully examined during life the lungs and heart of many suffering from flattening of the chest thus induced, and have in most cases failed to detect any material internal lesion.

I have been informed, both by workmen themselves and by their employers, that posture, even when it succeeds in causing flattening of the breast, gibbosity of the back, and inequality of the shoulders, is operative, if to any, to only a very slight extent, to the injury of health. The workmen have invariably said, that their diseases, and even their chest ailments, are more due to close and heated workshops and to dust, than to any other cause; while the masters have, with obvious justice, referred not a little of the illness of their men to the irregularity of their habits, and their excesses.

Neither induced by internal disease, nor inducing any such, of what import, it may be asked, can such alterations be? What they possess not themselves, they may acquire, if taken for the signs of internal disease. That importance which depression of the chest, the result merely of posture, does not possess, it acquires, if taken, or liable to be taken, for depression the result of phthisis. It is with this view that the subject is here considered. The mistake may be made, and has been made; but it need not be made, for each kind of depression has its respective concurring signs.

The depression of the chest, simply the result of posture, is to be known from the same alteration induced by phthisis, by the absence of the other signs of that disease, such as the prolonged expiration, the decided dulness on percussion, the reduced vesicular breathing, the increased resonance in the early stages, the cavernous respiration,

pectoriloquy, and the other sounds emanating from cavities in the structure of the lungs in the third stage.

When the depression is the result of posture, for the most part the loss of room in the cavity of the chest in one side is compensated by a corresponding amplification of the other; and when the whole upper part of the chest is depressed, an increase of room is secured for the lungs and heart, by the gibbous back already referred to. On the other hand, depression of the ribs consequent upon tubercular deposit, has no compensation, for this reason, that the depression is the result of the reduced contents of the chest, and follows, *pari passu*, upon the internal reduction. In this case, nothing internal is displaced, so there is no occasion for an increase of space elsewhere.

With the help of these physical signs, the two forms of depression may be diagnosticated, even when the depression from posture is associated with bronchitis, with emaciation and hectic fever, as in the case I have related.

It is to be observed, that though depression of the chest may have originated in posture in occupation, yet it may after a time become associated with phthisis, and owe its further development to that disease. In such a case, depression formerly unaccompanied by decided dulness, reduced vesicular murmur, etc., will now be attended by them. It may be, that the depression will be abnormally great, and that the amplification of the chest in some other quarter, which compensated the loss of space, may yet exist.

It perhaps has tended, on the part of young practitioners, to cause the depression of the chest from posture in working men to be mistaken for a sign of phthisis, that the depression referred to is more common amongst the weak and sickly than amongst the robust. The delicate of frame, the irregular in habit, and the ill-fed, sooner yield to the deforming influence of posture than the opposite. It is an interesting fact, that on visiting a certain cabinet manufactory on a late occasion, I did not see one man who appeared distorted or unhealthy. I was informed that the men were well paid, and that the master could afford to employ only regular men. The same day I was taken to a workshop devoted to the same description of trade: I was told that the master was poor, did a lower kind of business, and paid his workpeople indifferently. I found the men thin, sickly, and the shoulders unsymmetrical. The most perfect specimen of the flat breast and the gibbous back which I have seen, met me there.

It appears that on the discontinuance of the posture which has induced the depression, the deformity becomes disposed to remove. A material elevation has certainly taken place in the left side of the patient whose case is related at the commencement of this communication. No such correction takes place in phthisis; doubtless, here, as in cases of ricketty curvature of the limbs, there is an ever-watchful principle at work in the body, ready to restore, under favourable circumstances, the natural conformation. It only awaits the removal of untoward circumstances, too strong to be overcome, which have neutralised it for a time, in order that it may recal the formative organs from their erring course to their normal action. How beautiful is such a reparation; how it tells of God in every living thing; how encouraging to the physician, as well as soul-improving to the man!

Although it has been mentioned as one of the diagnostic signs of depression of the ribs consequent upon posture, that percussion affords no decided dulness as in phthisis, there is little doubt that I have made out in numerous cases of flat breasts, the result of posture, as well as a natural characteristic, a certain amount of dulness. I am convinced that the resounding clearness, which we obtain from a prominent or barrel-like breast containing healthy viscera, is seldom or never elicited from the flat chest. On the other hand, the amplified part, such as the gibbous back, is more resonant than the natural back. The flat and contracted thorax I have often found to give out sounds on percussion somewhat dull, although the contained lung was in no degree solidified; and again, I have frequently evoked sounds from the rounded, and prominent, and barrel-like thorax, much clearer and ringing, although there was no reason to believe that the lungs were more filled with air than in cases of flattened chest.

These facts have led me to believe, that the resonance of the chest is due, less than is usually credited, to the quantity of air in the lung, and that it is materially affected by the form of the bony frame. But perhaps this is matter for consideration at another time; and it will suffice to have referred to the point, which is one which should be taken into account, when the student gauges the acoustic properties of the thorax in disease. Yet I may allude for a moment to the analogous formation of musical instruments. The sounding board of some pianos is somewhat arched in order to increase the sound; and when by any accident this form is reduced, the sound is proportionably lost. The arched form of other musical instruments favours this resonance. It is not otherwise with the human thorax. Such being the case, the student, in order that he may the more accurately appreciate the sounds of the thorax, as signs of the condition of the contained viscera, would do well to make himself acquainted with the respective sounds of the different kinds of thorax in health, as a preliminary to the study of those of the same part in disease.

Park-street, Grosvenor-square, October 1851.

ON THE RELATIONS OF UTERINE TO CONSTITUTIONAL DISORDER.

By F. W. MACKENZIE, M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

(Continued from p. 1006 of last Number.)

In the preceding observations, I have treated more particularly of the influence of derangement of the cerebro-spinal portion of the nervous system upon the uterine organs, as exemplifying one form of the relations which subsist between uterine and constitutional disorder. I referred more especially to spinal irritation, as a consequence of certain mental affections on the one hand, and the cause of uterine diseases on the other; and I adduced several facts and cases in support of the opinions which I ventured to express. I shall now proceed to treat of morbid conditions of the sympathetic or ganglionic portion of the nervous system, as connected with the question under consideration; and, in doing so, will select the subject of Chylopoietic Disorder, as being best calculated to illustrate the nature, the extent, and the importance of their relations to uterine pathology.

But, in speaking of chylopoietic disorder, it may be necessary to premise, that the term admits of a more extended and somewhat different signification to that which is ordinarily attached to it. We speak, for instance, of indigestion, dyspepsia, bilious disorders, disorder of the digestive organs, etc., as implying some derangement of the stomach, liver, or other portion of the alimentary canal, whilst in reality it is often the case that these affections are but the manifestations of a more deep-seated disorder, one involving either the nervous system at large, or the ganglionic portion in particular. For, just as it is true, that various local disorders of parts, which are supplied with nerves from the cerebro-spinal axis, depend upon irritation or disease of the cerebral or spinal ganglia, so is it true that many functional affections of the stomach, liver, and intestines, and of other organs, whose nerves are derived from the sympathetic, depend primarily upon irritation, or disease of the ganglia of this portion of the nervous system. It is probable, indeed, that it is from impressions made upon these ganglia that the digestive organs participate so largely in morbid states of the constitution, and have hence been regarded as the centre of sympathy; that it is upon these ganglia that all mental and emotional stimuli immediately operate; and that it is these which are primarily influenced by abnormal conditions of the blood. The impressions so made are doubtless soon followed by various functional disorders of the chylopoietic viscera; but these are, in many cases, rather symptomatic of disease of the ganglia, than diseases of the viscera themselves.

But however regarded, there is no system of organs which is so liable to disorder as the digestive, whether from the operation of causes which are directly applied to them—constitutional derangement, mental affections, or sympathy; and there is none, the disorders of which react so injuriously upon the constitution at large, or the uterine organs in particular. There are few instances of uterine disease which are not

attended with some form of chylopoietic disorder, either as a cause, a consequence, or an accidental complication; and upon this association of morbid actions, or rather upon the reciprocal influence which the disorders of one organ exercise upon those of the other, may be said to depend much of the difficulty which attends the treatment of uterine diseases. On looking to the table published in the preceding part of this inquiry, it will be found, that digestive disorder was an almost invariable concomitant in the cases referred to; that in by far the larger number it had existed as an antecedent; whilst the history and results of treatment, which will hereafter be alluded to, tend to show that this antecedence was not merely casual, but that the chylopoietic disorder was generally the cause of the uterine. On these grounds, then, alone, the disorders in question demand a careful consideration, in connexion with the present inquiry, inasmuch as they must have important relations to the pathology of uterine diseases.

And if, in the first place, it be asked, what are the circumstances in which such disorders arise? It may be replied, that they are referrible to two principal sources; the one comprehending all such causes as, applied to the *surface of the gastro-intestinal mucous membrane*, are calculated to produce irritation or disorder, such as those connected with errors and irregularities of diet, and the presence of crude, unhealthy, or undigested matters in the primæ viæ; the other, various constitutional causes, referrible to the blood, the nervous system generally, or particular organs or parts, or such states of mind as are calculated to act unfavourably upon the *ganglia of the sympathetic*, which more immediately preside over the functions of these viscera.

Thus, whenever the constitutional powers are greatly depressed, or the body is enfeebled, either from disease, want, privation, mental, or any other causes, it will follow, that the stomach and digestive organs, participating in this general weakness or depression, will become morbidly susceptible, and thus readily disordered, either spontaneously, or through the operation of some trivial disturbing cause.

But in other cases, and when no such general weakness or depression exists, the digestive organs may become deranged, from various local irritations or diseases in remote parts of the body, and this in conformity with a principle which will hereafter be referred to. Thus we observe in all the affections of important organs, such as the brain, lungs, heart, kidneys, uterus, etc, that the stomach becomes sympathetically disordered, and such disorder the cause of various secondary diseases; but such consequences are not confined to the more important organs of the body alone, for irritation wherever existing, however trivial in degree, or however apparently unimportant the part, may, under certain circumstances, also affect the stomach and digestive organs; and here, as in the former case, the affection thus secondarily produced will again react upon the constitution, as well as on particular parts, variously disturbing the former, and leading to divers local diseases in regard to the latter.

Thus it happens that in persons who inherit a feeble constitution, or in whom it has been acquired, whose nervous system is naturally irritable, or has been rendered so by any causes whatsoever, who have been the subjects of severe disease, who have been addicted to irregularities of diet, whose health has suffered from a residence in tropical

climates, from sedentary pursuits, intense study, privation, or anxiety, and in those in whom the blood is impoverished or deteriorated, the digestive organs become morbidly susceptible, and are thus readily disordered.

Now, in this general enumeration of the circumstances in which chylopoietic disorders arise, it will be found that nearly all of them apply with particular force to the habits and constitution of the female, as distinguished from the male. In her, the brain and the nervous system are more sensitive, and consequently more liable to be disordered by mental and other causes. In her, the constitutional powers are less vigorous, and these are often still further reduced by sedentary habits, and a disregard of proper hygienic measures. Education, in many instances, and particular pursuits in others, impair still more the tone of the nervous system, and proportionately injure the constitution; whilst from the concurrence of these several causes an impoverished condition of the blood, sooner or later, is induced, which cooperates with them in originating and maintaining an irritable and disordered state of the stomach and digestive organs: and the disorder thus secondarily induced, seldom fails to react again upon the constitution, and thus to produce a state of general irritation, which is favourable to the production of various local diseases.

But in this general reaction it will be found, that some organs are more liable to be disordered than others, according as the sympathy between the stomach and particular organs is more or less intimate. The stomach has been truly said to be the centre of sympathy, but the nature of this sympathy varies very considerably in regard to different organs. With none is it so intimate as with the uterus, and we may hence, in conformity with the acknowledged laws which regulate this principle of action, as deduced from a careful consideration of various facts and circumstances, legitimately account for the frequent, and, indeed, almost constant occurrence of uterine disease, as a consequence of chylopoietic disorder.

The sympathies of the stomach, I need scarcely remark, have long attracted the attention of medical men; they were known nearly two thousand years ago to Celsus, who observes, that when the stomach is disordered, the whole system is disturbed, and that the weaker parts more especially suffer. He pointed out its influence upon the heart's action, and its tendency to produce various local diseases in remote parts of the body, as also its capability of maintaining a state of general irritation of the nervous system. But it is more especially to the industry and genius of Hunter, that we are indebted for nearly all that is at present known upon the subject. He taught us, that through this principle, all the actions in an animal have a connexion with one another; the living principle of one part sympathising with the living principle of another; the nerves of one part sympathising with the action of the nerves in another; and the mind sympathising with the mind; that, as a consequence of this principle, no considerable disorder can take place in one part of the body without producing correspondent derangement in others; that, as another consequence of this principle, an action may arise secondarily, without any immediate impression; the part so secondarily impressed, either acting in conjunction with that primarily acted on, or taking the whole action on

itself; or, as he otherwise expressed it, one part under the stimulus of irritation or disease, is capable of stimulating another into sensation, action, etc. He maintained, moreover, that sympathy is a principle in animal bodies, so intimately connected with every possible impression, affection, and action, that we cannot have a proper conception of the animal economy respecting diseases, without taking it into consideration. It arises, he observes, from every part of the body being ready to fall into affections and actions in consequence of an impression, affection, or action, taking place in some other part, and it consists essentially in one part participating in the impressions, affections, and actions of another.

But we are more especially indebted to him for pointing out the importance of this subject in connexion with the stomach and digestive organs on the one hand, and morbid states of the constitution, on the other. From an attentive consideration of many facts, he was led to believe that the stomach had a direct sympathy with all parts of the body, and thus might be regarded as the seat of universal sympathy; that when the stomach sympathised strongly with any part, this state of the stomach produced a morbid condition of the constitution, from which, however, some organs would suffer more than others, and whence it followed, that various local and apparently unimportant diseases of remote parts of the body might, through the medium of this organ, produce a state of constitution favourable to the causation of various secondary diseases, the precise nature of which would, in a great measure, depend upon the peculiar sympathies subsisting between the stomach and particular organs. The correctness of these doctrines, and the importance of their application to medical practice, have been especially dwelt upon by Mr. Abernethy, who has shown, that if the disordered feelings and functions of the digestive organs thus induced be removed, the greatest degrees of nervous disorder in remote organs and parts will sometimes cease suddenly; at other times, they will be greatly mitigated and subside, proving that, in such cases, the one derangement is the cause of the other.

From a careful consideration of this subject, we may, I think, deduce some practical conclusions which bear immediately upon the pathology and treatment of uterine diseases. We may learn, in the first place, that impressions made upon the stomach and digestive organs may be so reflected upon the uterus as to give rise to uterine disorder, without the stomach and digestive organs themselves being very manifestly disturbed. Thus it often happens, that trifling irregularities of diet, and other causes, which can only act, at least primarily, upon the digestive organs, frequently occasion feelings of pain, discomfort, or uneasiness in the uterus, when the former organs would appear to have been but slightly disturbed; and in some cases, the uterine disorder may be very considerable, while that of the stomach is scarcely perceptible. The same thing is observed also in the instance of a loaded, flatulent, or disordered state of the colon, which may be unattended by any pain or discomfort in the immediate seat of the disorder, while considerable pain and uneasiness may be felt in the uterine and ovarian regions as its consequence. Now these circumstances are precisely in accordance with what has been laid down by

Hunter as a law or principle of sympathy; for he taught, that when disorders and consequent diseases thus arise, the organ sympathetically disturbed may suffer more than that originally affected; or that the part secondarily impressed may take the whole action on itself. As regards the uterine organs, this principle is of the utmost importance, and admits of an extensive application; for there are none which are so ready to fall into morbid actions and affections, as a consequence of the morbid actions and affections of other organs; and whilst the sympathetic disorder of these, thus induced, may assume considerable importance, the actual causes from which it springs, and by which it is continued, may be altogether lost sight of, if not carefully looked for. I had on one occasion a striking illustration of this form of sympathy, in the instance of a parturient patient, in whom, of course, the uterine organs are more than usually susceptible to impression, and, consequently, in whom the effects of various causes are more easily appreciated.

Case. Mrs. C., aged 34, was confined on the 12th August; she went on favourably until the seventh day after her confinement, when she drank a small quantity of cold toast-water, being at the time not very strong, and somewhat heated and perspiring. This was immediately followed by a sensation of extreme coldness in the uterus, which continued for a period of two days persistently. From the first, she felt no sensation of cold in the stomach, the impression having been entirely reflected from this organ upon the uterus. Had the sensation experienced been that of pain instead of cold, it might have led to the conclusion that there was uterine disorder or disease, and thus to the adoption of measures which, as the result proved, would have been altogether unnecessary.

Secondly, we may learn how all the circumstances which have been referred to, as calculated to give rise to gastro-intestinal derangement, may be regarded, in one sense, as the causes of uterine disorders also. For though the operation of these is primarily upon the stomach and digestive organs, or the ganglia connected with them, and derangement of these is first produced, yet this, by a sympathetic or reflected kind of operation, may, and frequently does, become the cause of secondary uterine affections. Hence it is that many circumstances, not apparently having any connexion with the uterus or its diseases, thus become so, and require to be carefully considered in their treatment. We can thus see how the causes previously spoken of, such as depressed states of the constitution, irritable conditions of the nervous system, morbid conditions of the blood, constitutional derangement of any kind, local irritation or disease, irregularities of diet, sedentary pursuits, anxiety of mind, a residence in warm climates, want, privation, etc., may indirectly affect the uterine organs, and either originate or maintain a state of uterine irritation or disease.

Thirdly, it will follow, that when causes have primarily and directly acted upon the uterine organs, as when cold or sudden fright have checked or interfered with the menstrual secretion, such arrest or interference will speedily be followed by corresponding disorder of the stomach and digestive organs, which will, in turn, sympathetically augment the former, and variously disturb the whole constitution. If we carefully inquire into the history of such cases, this, in fact, will be

generally found to be the usual order and sequence of the morbid actions which take place. Almost invariably the digestive organs become disturbed concurrently with the constitution; and the disorder of these, while it increases the constitutional disturbance, interferes with the return of healthy uterine action. It is well known, for instance, that anæmia is a frequent consequence of suddenly suppressed menstruation; and it has generally been attributed to the direct action of the uterus upon the blood, or the constitution: but I believe that in nearly all cases it will be found to be immediately dependent upon an intermediate disorder of the stomach and digestive organs, which, although occasioned by the suppression, is continued independently of it. This may not always be very obvious, whilst sometimes it is very considerable, and consequent upon it the blood becomes impoverished, which, together with the chylopoietic disorder, keeps up a state of irritation of the uterine organs, which is altogether incompatible with the return of healthy functional action. By correcting the disorder of the digestive organs, however, together with any other that may have been simultaneously produced, as also the condition of the blood, it will generally happen that healthy uterine action will spontaneously return without any specific treatment. Of this I have seen numerous instances.

Lastly, seeing how readily gastro-intestinal disorders may be occasioned by uterine disease, and how painfully they react again upon the constitution and the uterine organs, we may learn the importance of maintaining tranquillity of the stomach and digestive organs in the treatment of those cases of organic uterine disease which are not susceptible of radical cure. Almost all such diseases may be said to occur in two forms—the one being active, the other quiescent—and in the latter state they are often compatible with a considerable degree of health and freedom from local uneasiness. For of no organs can it so truly be said as of the uterine, that a very great amount of organic disease is not inconsistent with a tolerably healthy performance of function, if incidental causes of disorder or irritation are removed. The causes, then, of such incidental disorder or irritation, deserve to be carefully investigated; and they will, I am persuaded, be more frequently found in connexion with the derangements in question than is generally supposed. Upon these, indeed, have appeared to me to depend, for the most part, those dangerous consequences which so often occur in connexion with organic uterine diseases, and which are so fraught with injury to the health and constitution of the patient. To take fibrous tumours in the walls of the uterus as an example, we find them in some cases altogether unproductive of any particular symptoms; and even when of considerable size, they may continue for many years without being even recognised either by the patient or practitioner. Menstruation may go on normally; pregnancy may take place, and proceed favourably; and parturition may be safely accomplished. But in other cases we find them attended with much irritation of the uterus, and great functional disorder, such as pain, hæmorrhage, leucorrhœa, etc. Now that which determines the difference in these cases, appears to me to be altogether independent of the uterus and of these particular growths, and may in a great measure be traced to irritative disorder of other organs which sympathetically

disturb the uterus, morbid conditions of the blood, and disturbed states of the nervous system generally; and that such is really the case is proved by the fact, that if these incidental sources of uterine irritation be removed, such active forms of uterine disease will become quiescent, and cease to endanger the health or comfort of the patient. Of this I have also seen numerous examples.

When again we consider the relations of the stomach and digestive organs to the ganglia and nerves of organic lfe; when we bear in mind that the uterus is principally supplied with nerves from this source; that its ganglia and nervous endowments are very considerable, and that they have intimate connexions through filaments and plexuses with the great ganglia which immediately preside over the functions of the stomach and digestive organs, we must admit that there are ample reasons for believing that morbid conditions of the one organ should be rapidly propagated to the other; for it is a well-established physiological dogma, that when organs are supplied with nerves from the same ganglia, they more readily participate in each other's actions, impressions, and affections, both morbid and physiological, than when they are supplied with nerves from a different source. From a consideration of this principle, it would appear obvious, that not only do the whole of the chylopoietic viscera sympathise intimately with one another, but that this sympathy is extended to the whole of the organs contained in the pelvis, of which the uterine may be considered as the most important. From the earliest periods, the sympathies of the uterus with the stomach have attracted the attention of medical men; but the *reciprocal* nature of these sympathies have not been as carefully attended to, although it admits of easy demonstration that the uterus is more readily affected by morbid conditions of the stomach, than is the latter affected by morbid and peculiar conditions of the former; and accordingly it may be laid down as a sound pathological axiom, that in general the stomach cannot be much disordered without giving rise to correspondent disorder of the uterus. When severe gastric irritation exists, the sympathetic uterine disorder may, and often is, equally severe; but in slighter forms of disorder of the stomach and digestive organs, the same principle holds equally good, and hence from such causes various subdued forms of uterine disorder may arise. It is to this point I am anxious more especially to direct attention, because whilst, on the one hand, the influence of uterine derangement upon the stomach is generally admitted, as is also that of severe gastric disorder upon the uterus, the reciprocal relations which subsist between the slighter forms of irritative disorder of both, do not appear to have been sufficiently recognised, or if recognised, they have not been duly regarded in practice by the generality of practitioners.

Looking again to the circumstances in which gastro-intestinal derangements originate, seeing that they may be perpetuated by an endless variety of causes, we cannot be surprised that consecutive disorders, uterine as well as others, should often be protracted, and difficult of removal. For whilst disorders of the digestive organs, in some form or other, are probably the most frequent of the maladies which prevail in social life, they are at the same time those which it is most difficult to rectify. In some cases, they are dependent upon

habits or modes of life, which the patient cannot, or will not, relinquish. In others they arise from mental or moral causes, which in the varied forms of disquietude of mind, anxiety, trouble, or affliction, are almost inseparable from our social existence. In one grade of society they are met with as a consequence of indolence, dissipation, or excess; in another, as a result of want, penury, and destitution; and such disorders, however induced, by their reaction upon the constitution and the nervous system, are rendered additionally complex and proportionately difficult of cure. On this subject, an eminent writer says,—"Of late I have been inclined to regard these circumstances as the cause of the complicated diseases which are met with in man so much more frequently than in animals. In man the brain is more sensitive, and liable to be disordered by mental affections. In man the digestive organs are liable to be disordered by stimulating and unnatural diet. Sedentary habits and impure air cooperate to aggravate these disorders. The affections of the brain and digestive organs mutually increase each other, and thus a state of constitution arises which is productive of the most general and complex diseases. But even these do not seem to me to be the most calamitous terminations of such causes. The disorder of the sensorium, excited and aggravated by the means which have been described, frequently affects the mind. The operations of the intellect become enfeebled, perplexed, and perverted. The temper and disposition irritable, unbenevolent, and desponding. The moral character and conduct appears even liable to be affected by these circumstances. The individual in this case is not the only sufferer, but the evil extends to his connexions and to society."[1]

Impressed with the importance of these and similar considerations, I have for many years been accustomed to study uterine diseases with especial reference to their constitutional origin and causes; and in taking the histories of cases, I have more particularly sought for information on this point, which I have carefully noted down. The result of doing so has been to convince me that constitutional causes have more to do with the origin and continuance of uterine diseases than is commonly supposed; that chylopoietic disorders—sometimes singly, but more frequently associated with others—do, in the great majority, precede and give rise, first, to uterine irritation, and, secondly, to various uterine diseases; and farther, that a proper and full appreciation of this circumstance is indispensably necessary to their successful treatment. The extent to which chylopoietic derangement is met with in connexion with this class of disorders, either as a cause, a consequence, or an accidental complication, would be altogether incredible, if facts did not directly support the observation. Thus of the hundred cases referred to, and tabulated in the earlier part of this paper, chylopoietic disorder existed as an antecedent in 82, and as a concomitant in 97. In 33 it coexisted with spinal irritation; in 87, with anæmia; and in 20, anæmia; spinal irritation and chylopoietic disorder were met with concurrently. It is surely then unnecessary to adduce any further evidence in support of the opinion that such disorders, either singly or combined, do, in a large proportion of cases, precede and give rise

[1] Abernethy. Surgical Works, vol. i, p. 265.

to uterine derangement, and are also the chief causes by which these derangements are both complicated and perpetuated.

In proceeding to illustrate these views by a reference to practical examples, I shall, in the first place, adduce cases which show the severe consequences which may be occasioned by chylopoietic disorder when this is of a marked character, or the uterine organs are in a state of undue susceptibility. This latter condition is best exemplified in the instance of parturient females, in whom the uterine organs, from being in functional activity, are unusually susceptible to impressions, and in whom, consequently, the operation of causes calculated to disturb them is best studied and observed. But another purpose will also be served by doing so; for by showing the disastrous consequences which may result under these circumstances from such causes, we may learn to appreciate the injurious tendency of similar causes upon the uterine organs when occurring in a slighter degree, or when these are in a less susceptible state. For, if in the former case it can be shown that sudden or violent irritation or derangement of the stomach and digestive organs can so affect the uterus, when it is thus susceptible, as to give rise to considerable disturbance of this organ, or of the constitution in connexion with it, then it appears to me that it will follow as a necessary corollary from such facts, that slighter forms of continued gastro-intestinal disorder may so affect the uterine organs as to give rise to less violent, but more persistent forms of uterine derangement.

The consequences to be apprehended from violent or sudden gastro-intestinal disorder in the instance of pregnant females, are convulsions, premature labour, the death of the child, and various untoward occurrences during the puerperal period. I shall, in the first place, select two cases to illustrate this influence, and the consequences which may sometimes happen from omitting to recognise and to remedy such antecedent disorder. I shall then add two others, in which similar disasters were to be apprehended, but were averted by adopting prompt measures for the relief of the chylopoietic derangement.

Case. A young lady of considerable fortune, within a month of her confinement, entertained a party of friends in the Christmas of 1845. She had on a former occasion been prematurely brought to bed of a still-born child, and this circumstance, together with the anxiety felt for her by her husband and friends, had induced them to place her under the care of an experienced practitioner, who for a month previously had almost daily visited her, and on the day in question, reported that he considered her health and prospects to be as favourable as could be wished. The dinner consisted of the usual rich fare which is customary at that season of the year, and although she partook of it moderately, it was evident that her stomach had become disordered. On leaving the dinner table, she felt faint, sick, and indisposed, and her medical attendant was sent for; previously, however, to his arrival, frequent efforts at vomiting had taken place, in some of which portions of food had been thrown up. She was somewhat relieved by this, and he, on his arrival, finding her better, and considering the case to be one rather of irritability of the stomach than of positive disorder, and believing that the vomiting which had taken place had sufficiently unloaded the stomach

of obnoxious matters, contented himself by prescribing effervescing salines, with small doses of laudanum. Towards midnight the symptoms were relieved, the opiates had produced a disposition to sleep, and he left with the conviction that no farther bad consequences would ensue. About five the next morning she was attacked with convulsions, and, as I was in the house on a visit, I was called up to see her. As soon as a lancet could be obtained, I took a basin of blood from her arm, and her medical attendant, who had been sent for, arrived shortly afterwards with another practitioner. The bleeding had somewhat relieved the convulsions, and consciousness returned, but only for a short time. In consultation, it was not thought advisable to carry depletion any further, and soothing calmative measures were considered to be indicated. The head was shaved and kept cool; salines were given, containing small doses of opium, and the utmost tranquillity was enjoined; nevertheless the convulsions continued to recur; in the course of the next day, labour-pains were observed: which were assisted as far as it was possible, in the hope that when labour had taken place, the convulsions would cease. But this was delusive; in due time the patient was delivered of a still-born child, but there was no remission of the convulsions. The patient gradually became comatose, and died on the third day. On a *post-mortem* examination, it was found that the sinuses of the brain were congested, and that the brain itself was more vascular than natural. The ventricles contained about two ounces of serum, and a small quantity was effused at the base of the brain. No examination was made of the stomach or alimentary canal

Whether a different result would have followed a different mode of treatment at the onset of this case; whether, in fact, if the state of the stomach and bowels had been carefully investigated, and they had been thoroughly unloaded of their obnoxious contents by evacuant measures, the patient would have survived, I am unwilling to express an opinion; but there can be no doubt, that the train of events which ended in the death of this lady, originated in a disordered state of the stomach and digestive organs, together with an advanced period of pregnancy. Looking, indeed, to the fact that the nervous system is almost morbidly susceptible to impressions during this state from a variety of circumstances, we cannot be surprised that when additional disturbing causes come into operation, and more particularly gastro-intestinal irritation, that violent consequences should sometimes ensue, and such as were observed in the present case. That a disordered state of the stomach and bowels existed, and immediately gave rise to the attack in this case, is shown by the fact of the patient having been particularly well up to the period of her partaking of a rich indigestible meal, by the occurrence of nausea and vomiting shortly afterwards, and by the convulsions beginning almost immediately after the spontaneous efforts at vomiting had been subdued by opiates. Such cases are extremely but painfully instructive, and should teach us the necessity of examining carefully the state of the stomach and digestive organs whenever nervous disorder is threatened during pregnancy, or the puerperal state.

Case. A lady of extremely nervous temperament, aged 27, and whose general health had been for many years very delicate, had

arrived at the latter part of the eighth month of pregnancy, when she began to suffer rather severely from gastric irritation. She had throughout her pregnancy suffered much from nausea and irritability of the stomach; and at first the additional symptom was not thought to be of much importance; but as it continued persistently, and was the cause of great uneasiness, an eminent obstetric physician was consulted about her case. He saw her on the 15th of April, and took a very favourable view of it, considering that the gastric irritation was rather dependent upon the very nervous temperament of the patient, together with the period of pregnancy to which she had arrived, than anything else, and he advised a trial of sedatives, such as the hydrocyanic acid, the tincture of henbane and hop, in small doses, with the sesquicarbonate of soda. He did not consider that any unfavourable consequences would ensue. The remedies suggested were tried in various forms, without any material benefit resulting. On the other hand, the gastric irritation became more decided, and at times was very intense. Leeches and sinapisms to the epigastrium were now had recourse to, and other combinations of the remedies proposed were tried, together with opiates and purgative enemata, but still without much positive advantage. On the morning of the 18th of April, she complained of headache and symptoms of cerebral irritation, which were speedily followed by violent convulsions. Free depletion was now practised, and after a considerable quantity of blood had been abstracted, the convulsions were subdued; and although the patient continued throughout the day in a most precarious state, she gradually rallied, and towards the close of the following had greatly recovered, and appeared upon the whole to be going on very favourably. On the 20th her condition was still satisfactory; no convulsions had returned for thirty-six hours; the epigastric pain had ceased, and the patient complained only of depression and weakness. Towards evening symptoms of labour were observed, and in a short time she was safely delivered of a still-born child, without any hæmorrhage or any other unfavourable circumstance occurring.

Now here I would pause in the narrative, and would inquire whether these calamitous consequences, viz., convulsions, premature labour, and the death of the child, did not remotely and immediately spring out of gastro-intestinal irritation or disorder? and whether all the antecedent symptoms were not referrible to this cause, which had existed in a marked manner for many days before these occurrences took place? Can it then be doubted, that if this had been properly recognised and removed, that all the untoward events which were afterwards developed would have been averted? But in this case it is evident, that the gastric irritation was regarded too lightly; and the inevitable consequence of continued irritation in an organ so vital as the stomach, and possessed of so many sympathies, when concurring with pregnancy, was soon displayed in sympathetic irritation of the brain, and its usual sequelæ, cerebral congestion and puerperal convulsions. From this history, we may at least learn, that gastro-intestinal irritation cannot remain long in a severe or persistent form in a pregnant female, without being fraught with much danger; that vascular disease will sooner or later supervene upon such irritation, either in the organ primarily affected, or in some other which has sym-

pathetic relations with it—and this more especially in the brain and the uterus. Hence such consequences should, if possible, be anticipated; and if after the removal of applied causes of irritation in the stomach and alimentary canal by emetics and purgatives, and after fomentations, sinapisms, and sedatives, have been fairly tried and proved to be unsuccessful, it becomes imperatively necessary in these cases to abstract blood from the arm as a precautionary measure, proportioning the quantity to the strength of the patient's constitution, and the intensity of the local irritation, for thus only can vascular disease and its consequences be averted. Nor again is delicacy of constitution any objection to this proceeding; for, as a general rule, it is in the weakly, the delicate, and the anæmic, that local irritation most readily passes into congestive or vascular disease.

But to resume the narrative: the patient had been safely delivered, and for several days subsequently went on very well, much better indeed than could have been expected. Her appetite was good, she enjoyed her food, and slept well at night: the tongue was clean, and the bowels regular. Everything thus progressed favourably, until the seventh day after her confinement. She then saw some friends in the morning, with whom she conversed rather freely, and to whom she expressed herself highly pleased with her very favourable progress. At two P.M. she had dinner, which consisted, as on the preceding days, of fish, bread, and vegetables. This she appeared to enjoy very much, and it was afterwards ascertained, she partook of it very largely. Soon afterwards she felt faint and sick, complained of headache and became very nervous and excitable; so much so that the slightest noise occasioned her to start and feel alarmed. After a time she had uneasy sensations in the pelvic region, in the right hip more particularly, and back, and these soon extended down the whole of the right extremity. Unfortunately, the causes of these symptoms were not at first recognised, the state of the stomach and bowels was not carefully investigated, and the proper remedies were consequently withheld. The symptoms were attributed rather to the excitement and fatigue which had been produced by seeing her friends in the morning, and to her having exerted herself disproportiontely to her strength. It was not then sufficiently considered that a large meal, eaten under circumstances of much physical exhaustion consequent upon the loss of a great quantity of blood, could have led to these results; and accordingly, under the impression I have mentioned, soothing calmative measures were adopted. Ice was applied to the head, and the patient was kept very quiet, in the hope that by rest and tranquillity her symptoms would pass away; but at the end of twenty-four hours she was not materially better: on the other hand, the headache and nervous excitability had increased, and the pain in the pelvic and abdominal region continued to be very intense. After the measures mentioned had been employed for some time, together with aperients, a trial of the Indian hemp was determined upon, at the suggestion of a very experienced practitioner. At first it appeared to have a good effect, subduing the pain and nervous excitement; but afterwards it became more and more questionable in its efficacy. The nervous symptoms, on the other hand, increased the restlessness, and sleeplessness became greater; and the whole of

the pelvic and abdominal organs were greatly disturbed. The pulse became quick, the tongue dry and brown, and there was occasionally a disposition to delirium. Additional advice was now sought for, and an eminent obstetric physician visited the case. The opinion he at first expressed was that no danger need be apprehended, and that the symptoms depended mainly upon weakness and nervous irritability consequent upon the previous loss of blood. Opium was especially recommended and given; but as the symptoms continued unrelieved after forty-eight hours, it was feared that the pelvic irritation had led, or would lead shortly, to the formation of a pelvic abscess. For some days the condition of the patient was most critical, and her sufferings were very great, notwithstanding the regular administration of opium. The whole of the chylopoietic and pelvic viscera were greatly disordered; the abdomen was tense, painful, and tumid; and the patient often delirious. After a time, throughout which there was much pain in the right hip, the superficial veins about the groin began to enlarge, and the corresponding extremity to swell, and this was followed by increased pain in the hip and groin of this side. In a short time, the symptoms of phlegmasia dolens became manifest, attended with excruciating suffering and additional constitutional derangement. The treatment throughout was of a soothing and sustaining nature. Opium was administered rather freely—the bowels and secretions generally were regulated—food and stimulants were regularly given—and local pain and suffering were relieved by fomentations and soothing applications. The progress of the case was slow, but upon the whole satisfactory; and after a protracted illness and convalescence, the patient may be said to have perfectly recovered, although still somewhat weak and depressed in health.

I have not attempted, in the foregoing details, to give more than a very general outline of this case, for to do more would be altogether incompatible with the limits of this paper. It has rather been my object to point out the order and sequence of the actions which followed upon gastro-intestinal derangement, and to show how readily even trivial errors of diet, in persons whose constitution or uterine organs are unduly susceptible, may lead to very serious consequences; and at the same time to show how necessary and important it is to discern and rectify such errors promptly and decisively, in order to avert these calamitous effects. Had the patient taken an emetic, and had the stomach been thoroughly disburthened of its load on the accession of the symptoms, which commenced after the dinner taken on the seventh day after labour, I am convinced that all the ulterior consequences which supervened would have been prevented. Of this I am more and more satisfied, the more I reflect upon the history and progress of the case, and consider it in connexion with others of which I have personal knowledge. That all the untoward consequences which followed in this case mainly depended upon, and arose from chylopoietic disorder, is, it appears to me, sufficiently evident; for the patient had been progressing most favourably up to this date, and gastric symptoms in the first place, and intestinal in the second, were the first to declare themselves, whilst all the subsequent phenomena which occurred may be readily and legitimately deduced from such

chylopoietic disorder. Nothing, indeed, appears to me more certain than that if food be eaten incautiously, when the digestive organs are much enfeebled, either by disease or constitutional causes, that digestion will not properly go on, and that the undigested food will become an irritant to the alimentary canal, and as such, a cause of various constitutional disorders, their severity being proportioned to the degree of general weakness or irritability which may prevail.

Let it then be remembered, that whether during pregnancy or the puerperal period, whenever it is possible or likely that applied causes of irritation exist in the stomach or alimentary canal, that evacuant measures should precede and take the place of all others; for nothing can compensate for their omission when such causes exist. The employment of emetics during both these periods, when circumstances require them, is perfectly safe, as I have verified in a number of cases. Indeed, the action of full vomiting during pregnancy is infinitely less trying or dangerous to the patient, than the incessant retchings with which some females are tormented throughout the greater part of pregnancy, and in spite of which they do well. In illustration of this, and in order to place the results of such practice in apposition with those in which these measures have been omitted, I subjoin the particulars of the following cases.

Case. Mrs. R—ll, seven months advanced in pregnancy, was attended by me, October 5th, 1849. She had been suffering throughout the day from headache, flushing of the face, tension of the forehead, noises in the ears, occasional numbness and convulsive catchings in the fingers. These symptoms were attended with, and had been preceded by, nausea and a disposition to sickness, from which she had suffered, more or less, for several days. The stomach was so irritable, that scarcely anything would stay upon it: the bowels were constipated and flatulent, and she had uneasy sensations in the uterus, back, and hips, with occasional forcing pains, which threatened to end in premature labour. These symptoms appeared to have been connected with, and were remotely attributable to, mental anxiety and trouble, consequent upon which, and the co-existence of pregnancy, the stomach and digestive organs had become irritable and disordered. The presence of marked gastro-intestinal derangement under these circumstances, suggested to me the necessity of giving at once an emetic, after which an alterative was ordered, and subsequently she was directed to take a mixture containing Epsom salts, in an acidulated infusion of roses, by teaspoonfuls, until purging should take place. The next day, the patient was in every respect better, and tranquillity had been restored to the digestive organs, and to the constitution generally. The emetic had occasioned profuse vomiting, and a great quantity of sour offensive matter had been thrown up, which was followed by a subsidence of the sickness and gastric irritation. Subsequently the alterative and aperient were taken, and when purging had taken place, she was relieved of all cerebral and uterine uneasiness. She had no further recurrence of either, but continued to progress favourably, and at the full period was safely delivered of a healthy child, without any unfavourable occurrence taking place.

Case. I visited a lady at 3 A. M. on the 28th December 1847, who was four months advanced in pregnancy with her first child, and

who, it was reported, had been suddenly taken ill. She had fainted away, and had entirely lost all consciousness, and this without any very obvious cause. When I saw her, she was in a state of profound coma; her head was hot, the pupils contracted, and her pulse quick. She moaned frequently, and occasionally threw her hands instinctively to her head: she was, however, incapable of speaking, and no information could be obtained as to the history or cause of the attack. A medical gentleman, who had seen her before I arrived, and who was still in attendence, had given a full dose of calomel, had applied cold lotions to the head, and had also administered sal volatile in water, but hitherto without any beneficial effect. The absence of vascularity of the conjunctivæ, the contraction of the pupils, the quickness of the pulse, together with the youth of the patient, her age not exceeding twenty-two, led me to regard the cerebral affection as one of irritation rather than of congestion; and after repeated inquiries, it was elicited from her friends that she had partaken during the day of some rather indigestible food. I had no hesitation, therefore, under these circumstances, in prescribing an emetic, which with some difficulty was administered, but the result was very satisfactory, and profuse vomiting of a large quantity of undigested food soon followed, after which the consciousness of the patient returned. She suffered for some days from the effects of the attack, but upon the whole may be said to have recovered very favourably, and at the full period was safely delivered of a fine healthy child. It should be mentioned, that while she was unconscious, she had occasional convulsive catchings of the fingers; and I afterwards learnt, that before she became unconscious, she had very uneasy feelings in the uterine region—circumstances which appear to point on the one hand to a threatening of convulsions, and on the other to miscarriage, which were both averted by the administration of the emetic.

I have placed these four cases in juxta-position, for the double purpose of pointing out the serious consequences which may ensue from gastro-intestinal disorder when the uterine organs are in a susceptible condition, and of exemplifying the safety and advantage of the particular treatment which I have recommended. In the two former cases, the consequences of omitting this were painfully evident, whilst in the two latter the advantages derived from it would appear less obvious if the contrast were less striking. My object, however, is not so much to pursue this subject as to make it subservient to another purpose, viz., that of directing professional attention to the influence of slighter and less obvious forms of chylopoietic derangement in the causation of uterine disorders. For if it is admitted that violent irritation of the digestive organs, such as was met with in these cases, can be reflected upon the uterine organs so as to give rise to the consequences which followed in the first and second and were threatened in the third and fourth, viz., premature labour or miscarriage, the death of the child and puerperal convulsions, then it appears to me reasonable to conclude from such facts, that slighter forms of irritative disorder of the stomach and digestive organs may also affect the uterine organs when in a less susceptible state, and so give rise to uterine derangement of a more subdued, but, at the same time, more persistent character.

The disorders in question present themselves in almost endless variety, from a degree of irritation which is so slight as to be scarcely perceptible to the patient or practitioner, to one which is so severe as to disturb the whole constitution. Between these opposite extremes there is every possible gradation, and each, in its particular degree, may occasion secondary disease of corresponding severity. In the uterine organs, we observe consequences which are commensurate with their intensity; and whilst these are sometimes so slight as to amount to little more than mere irritability of the uterus, leucorrhœa, and irregularity of the menstrual functions, in other cases we observe distressing forms of hysteralgia, profuse leucorrhœa, and excessive, irregular, painful, or defective menstruation, occurring as a consequence of similar causes, when of a more decided character.

But in the instance of the slighter of these forms of chylopoietic disorder, it too frequently happens that their existence, or relations to the uterine malady, are altogether overlooked; and the latter continues thus silently, but steadily, to progress, until vascular disease may have supervened, and rendered it painfully manifest. On the other hand, when the chylopoietic derangement is of a marked and prominent character, and cannot be overlooked, it equally happens that it is often considered to be a mere accidental or tributary complement to the uterine affection. By one it is regarded as a consequence, by another as an accidental complication, whilst by a third it may be altogether disregarded; and hence it follows, that its importance and its relations to the uterine affection are often lost sight of, or at least imperfectly appreciated. If I were, however, to state the impression which many inquiries on this subject have left upon my mind, I should say that, in at least fifteen out of every twenty cases in which uterine and chylopoietic disorders coexist, the latter is not only the antecedent, but the cause of the former, whilst in the remainder only, or in a like proportion, can it be regarded as a sequence, or an effect. I am perfectly aware of the difficulty which attends any investigation having for its object the determination of the relations of power, cause, and effect, in regard to any given phenomena. But I take it, that that which is invariably, or nearly so, the antecedent to any particular event, has strong claims to be regarded as its cause; that this claim is increased, if no other circumstance can be shown to stand in such relationship to the event; and that it is still further demonstrated that this antecedent is the cause, when the event by which it has been followed ceases for the most part with its removal. Upon these grounds then more particularly, am I led to uphold the correctness of the opinion which I have expressed, in regard to the relations which subsist between uterine and chylopoietic disorders when both coexist; for I believe careful and properly directed inquiries will tend to show that, in such cases, the latter has nearly in all cases preceded the former, and has often accompanied it throughout: whilst in the great majority it will be found, that the correction of this disorder will be followed by the cessation of the uterine, unless, indeed, vascular or organic disease shall have supervened in the latter, and so rendered it independent of the former.

In support of the correctness of this opinion, I would refer to the

table published in the earlier part of this paper,[1] from which it will appear that chylopoietic preceded uterine disorder in 82 cases out of the 100, and that no other circumstance can be found which has such relations to it. And it will hereafter be shown, that the results of treatment confirm the general inferences which are deducible from these facts: for it will appear, that the removal of the chylopoietic disorder is generally followed either by the cessation of the uterine, or by a marked improvement taking place in regard to it.

We have, however, various forms and degrees of chylopoietic disorders to consider in connexion with uterine diseases; some being so slight and insidious as scarcely to be recognised without very careful investigation, whilst others are of a very marked and serious character. And, before proceeding to adduce the cases upon which the views advocated in this paper are more particularly founded, it may be well to describe the more general symptoms by which these disorders are attended; to state the pathological conditions on which they may be supposed to depend, and the principles upon which their treatment should be conducted. This is the more necessary, because, if the truth and accuracy of the opinions contained in this paper are to be tested, as they should be, by the results of similar treatment in other cases, it is manifestly important that the symptoms of such disorders should be readily recognised on the one hand, and adequately treated on the other.

Symptoms. The more common forms of chylopoietic disorder which occur in connexion with uterine diseases, and which are perhaps the most frequently overlooked, are characterised by the following symptoms: by certain deviations from the healthy state of the tongue, more especially on awaking in the morning; by a degree of fretfulness of temper or despondency of mind, which is unusual to the patient, and unwarranted by her circumstances; by some uneasy sensation, either constant or occasional, about the epigastrium; by some degree of irregularity in regard to the action of the bowels; by some unnatural appearances in the urine or stools; by variability of the appetite, which may be either excessive, defective, or depraved; by restlessness at night, and broken and unrefreshing sleep, whence patients arise in the morning with a feeling of weariness or fatigue. There is, also, often a disposition to blotches and eruptions on the skin; the feet and hands are often cold and clammy, and perspiration is readily induced by exercise.

Now, in regard to these symptoms generally, it should be observed that, unless they are carefully and diligently inquired for, the practitioner will often be led into error by the representations of the patient. In some, indeed, disorder of the digestive organs may have existed so long, as to have become habitual; and even when this is very considerable, it may be, and often is, set down by the patient as being natural or constitutional, and such as cannot have the least connexion with any coexisting local complaint. Again, when the gastro-intestinal disorder is less marked, the practitioner may be readily misled by the appearance of the tongue during the day, and the general statement of the patient, who may declare herself to be perfectly well, when she

[1] London Journal of Medicine, November 1851, p. 985.

may be found on inquiry to have all the symptoms which denote chylopoietic disorder. Hence it becomes necessary to direct the patient's attention to those particular symptoms in detail, which, in the aggregate, indicate the presence of such disorder; and it will thus often be found, that the tongue is habitually dry, furred, or unpleasant, on awaking in the morning; that the appetite is uncertain and capricious, and the bowels irregular; that the patient is languid and listless, anxious and despondent; that the pulse is frequent and feeble, the heart's action readily disturbed; and that other symptoms exist, equally characteristic of an irritable or disordered condition of the stomach and digestive organs, although the patient may have represented herself as being in good health.

Of the several indications, perhaps the appearances of the tongue furnish the least fallacious and most ready test of the presence of gastro-intestinal derangement. Its condition, however, under different circumstances, requires to be carefully investigated, for it will often be found to be furred at the back part, when it is tolerably clean at the front and edges; its appearance, again, will vary at different periods of the day, according to the different states of the stomach, and various states of mind which may arise. Hence any casual examination of the organ may, and often does, lead to erroneous conclusions; and it becomes indispensably necessary to ascertain its general condition when the patient first awakes in the morning, when it will often be found to be dry, furred, or unpleasant, and this even persistently, although during the day it is tolerably clean. Such abnormal deviations, however, demand to be carefully attended to, for they are certain and conclusive indications of the presence of gastric irritation or disorder. If, for instance, the tongue is simply dry, and this habitually on awaking in the morning, we have evidence that there is at least a deficiency of the secretions of this organ; and if there is no local cause for this deficiency, or constitutional febrile disturbance coexisting, we may reasonably infer that there is a corresponding deficiency of the gastric and hepatic secretions, the consequence of gastric or hepatic irritation, of which this is probably but a sympathetic effect. When, again, the tongue is habitually furred or unpleasant, as well as dry, we may equally deduce from these circumstances, that the gastric and hepatic secretions are not only deficient, but at the same time unhealthy. And such scanty, irregular, or unhealthy conditions in regard to the secretions of the stomach and liver, may again be legitimately attributed to an irritable or disordered state of the nervous ganglia of the sympathetic, which are more directly in relation with these organs, and which more immediately influence or regulate their secretions.

Pathology and Treatment. Thus we may, I think, correctly deduce, from a consideration of these circumstances, that the symptoms in question are more or less significant of a state of nervous irritability and weakness of the ganglionic nervous centres, whence the stomach, liver, and digestive organs are immediately supplied with nervous energy; that one of the primary consequences of this weakness and irritability, is a deficiency or depravity of the secretions which are ordinarily furnished by these organs, and upon which the healthy and proper performance of their functions mainly depends; whilst another consequence is, the production of various forms of disorder in regard

to these organs, as shown, perhaps, by pain, uneasiness, or some other kind of functional disturbance. Hence the indications of treatment, in such cases, should be to impart tone and vigour to the nervous system on the one hand, and to appease irritability and correct disorder on the other; whilst, at the same time, we adopt such measures as are calculated to improve and promote the secretions of the irritable organs.

But, in the first place, it is necessary that we should investigate the particular circumstances in which such weakness, irritability, and disorder may have originated; for these will often be found to have arisen from, or to be associated with, various constitutional causes, habits, customs, and modes of life, which will be but little amenable to medicinal treatment: and these must therefore be looked for and removed, before we attempt any specific treatment for the morbid conditions themselves. This, again, should be of a comprehensive character, having reference not only to the local affection, but also to the constitutional causes or disorders from which it may have sprung, and should comprise not merely medicinal measures, but these combined with proper care and attention to diet and regimen.

But, having premised such attention to the remote causes from which these disorders may have originated, and having removed these so far as they admit of being removed; having urged the necessity of relinquishing various habits, pursuits, and customs, which may have been prejudicial to health; having enjoined due attention to matters connected with regimen, the necessity of taking regular exercise, of keeping early hours, and having adequate rest and sleep; having also inculcated the necessity of proper dietetic measures, of adapting the quality and quantity of the food to the wants of the system and the powers of the digestive organs, and of observing regularity in regard to the periods of taking it,—it becomes a question to consider what therapeutic measures are indicated in these particular cases: and these can only be determined by considering what are the precise pathological states upon which these disorders depend. I have already expressed an opinion, that, in these cases, there is weakness and irritability of the ganglionic portion of the nervous system, leading to various functional disorders of the organs, and more especially to a deficiency or depravity of the secretions which they are destined to furnish, and upon which the proper performance of their functions depends. Hence it appears to me, that the indications of treatment should have reference more particularly to these circumstances, to weakness and irritability, on the one hand, and disordered action on the other; and the measures which are required for the cure of such pathological conditions, are more especially alteratives, tonics, and sedatives, which should be variously combined and exhibited according as these morbid states may more or less respectively coexist in different cases. On each of these remedies I will therefore proceed to make a few remarks, so far as they relate to my present subject.

1. Alteratives. The employment of alteratives, so long as disorder continues, and more especially when this is denoted by a faulty or defective state of the secretions, appears to me to be of the first importance in the medical treatment of these cases; for, so long as this continues, so long it is hopeless to anticipate benefit from

tonics, or strength or vigour of constitution from food; for, inasmuch as digestion in a great measure depends upon the purity and sufficiency of the secretions, which are poured out by the digestive organs during the digestive process, it must follow that, when these are defective or depraved, it will be proportionately disturbed, and that the food, instead of being converted into healthy blood, will pass into various crude, hurtful, or unassimilable matters, which, instead of nourishing the body, will be a source of irritation to the nervous system, and of injury to the constitution. But, in the use of alteratives, the utmost caution is required; and the greater the weakness which may coexist with disorder, the more sparingly should they be given. Mercurials, judiciously administered, appear to subserve this purpose better and more certainly, perhaps, than any other medicines; but there are many cases in which their utility is questionable, and others in which their employment would be fraught with positive harm. The circumstances, then, which tend respectively to these results, require to be carefully noted and considered.

The action of mercury on the constitution as a remedial agent, has been a fruitful source of controversy in the profession, and cannot even yet be said to have been satisfactorily determined. It has been variously considered as a stimulant or sedative, both stimulant and sedative, an alterative and tonic; but its action and effects differ essentially from any of these, and must be regarded as *sui generis*. That its action, however, is primarily upon the nervous system, and more especially upon the organic or sympathetic portion of it, is, it appears to me, the most legitimate inference which can be drawn from a consideration of the various circumstances which attend and follow its administration. This action, at the same time, is of a peculiar and specific character; calculated, on the one hand, to produce irritative disorder where none exists, but to correct, neutralise, or antagonise such irritation when already existing. Thus, for instance, when mercury is administered, even in the mildest form and the most moderate dose, to persons whose digestive organs are in a perfectly healthy and tranquil state, and who have not been accustomed to its stimulus, it seldom fails to produce considerable disturbance in them, such as would arise ordinarily from a variety of causes, of which again, when so produced, it is eminently curative. The following case, which occurs to me, illustrates this remark. A rather delicate little boy was attacked with a feverish cold, attended with a furred tongue, and much disorder of the biliary and digestive organs: he had a good deal of fever, was restless, constipated, and had entire loss of appetite. On account of the evident disorder of the liver and digestive organs, three grains of calomel were at once given him, and with the most decided benefit. Before any purgative action had taken place, the tongue had become clean, the fever had subsided, and the child slept comfortably for the first time for several nights. The benefit attending the administration of the medicine on this occasion, led to its being subsequently given under other circumstances, and here with a very different result. The child was not now suffering from any manifest disorder of the stomach and digestive organs, the tongue was clean, and the appetite was tolerably good; but his bowels were somewhat torpid, and there was a degree of weakness and delicacy of health which was attributed in part to a torpid or irregular action of

the liver. Upon this view of the case, the same dose of calomel was given, which had been so salutary on the former occasion; but the effects were now of a very different nature, and violent irritative disorder of the stomach, liver, and alimentary canal were the consequences. The little patient became sick, purged, and extremely uncomfortable, the tongue furred, and much general prostration ensued. Now here it is impossible to suppose otherwise, than that these different effects were mainly dependent upon the absence or presence of irritative disorder previously to the administration of the medicine; for, where such irritative disorder exists, the specific irritation set up by mercury tends, as it were, to neutralise or antagonise it, and thus to restore a state of nervous equilibrium or tranquillity. Whereas, in the absence of such antecedent irritation or disorder, the action of mercury is productive of many disagreeable and often injurious consequences.

This principle of action is also shown in a variety of instances: thus, when there is restlessness or sleeplessness at night, as a consequence of digestive disorder—an effect which is of frequent occurrence—the administration of a few grains of blue-pill will often procure sound and refreshing sleep, such, indeed, as to impress the patient with the idea that some form of opium had been taken. But this effect appears to me to be only from the specific action of the mercurial having been antagonistic or curative of the irritation previously existing; for, if the same dose of the same mercurial preparation be given to the same patient, in the absence of such irritative disorder, it seldom fails to produce the most opposite consequences—to produce restlessness and sleeplessness, a dry, furred, or unpleasant tongue, and an uneasy condition of the stomach and digestive organs, together with disorder of the biliary and other secretions. Hence, it appears to me, we may deduce, from careful attention to these circumstances, some rules which should guide us in its administration in the treatment of those disorders of the stomach and digestive organs, which are under consideration.

And, first, we may learn that mercurial medicines should never be given in these cases, unless there is positive evidence of the existence of disorder, as shown more particularly by an irregular, faulty, or morbid condition in regard to the secretions; for it must be borne in mind, that many morbid states of the chylopoietic organs, which are unquestionably conducive to uterine disease, depend rather upon weakness and irritability than upon actual disorder. If, then, the tongue is clean and moist, especially on awaking in the morning, and the alvine discharges do not indicate a deficiency of biliary or intestinal secretions, the use of mercury will be found to be very questionable, if not fraught with positive injury.

Secondly, we may learn that, in the administration of mercury, the form of this medicine, and the dose, and the frequency of its exhibition, should be mainly regulated by the degree of irritative disorder which may exist. In proportion as this is slight, should the dose of the mercurial be small; whilst, in the severer kinds of disorder, it may be given freely, and with the utmost benefit. In the more trivial forms of these disorders, I believe that an occasional dose of grey powder or blue pill at bed-time will be sufficient; but this should be

continued until the disordered state of the secretions shall have been rectified; whilst, in the more decided forms of these disorders, it will be necessary to administer the medicine in larger doses and at short intervals. And so long as the condition of the digestive organs is carefully watched, and disorder is found to continue, so long may it be given with perfect safety and advantage.

Again; in those cases in which there is great disturbance of the stomach, liver, and intestinal canal, as indicated by incessant nausea and retching, by very manifest derangement of the secretory functions of the liver and stomach, and by much irritative disorder of the small and large intestines, together with febrile disturbance, the administration of calomel is far preferable to that of any milder preparation of mercury. It often, by its specific action upon the nervous system, or rather upon its ganglionic portion, produces such antagonism to the existing irritation or disorder, as to restore tranquillity speedily both to the digestive organs and the constitution, and thus to justify the remark which has sometimes been made, that calomel in large doses is a powerful sedative.

I infer then, from a consideration of these circumstances, that mercurial medicines are only useful in the treatment of dyspeptic affections, when there is clear and unmistakeable evidence of the existence of disorder, and this not dependent upon merely applied causes within the alimentary canal which admit of removal, or on mental or other causes which are of a transient character; that the particular form of the medicine to be employed must be chiefly dependent upon the *degree* in which this disorder exists; that it may be continuously administered for longer or shorter periods, in doses proportionate to the severity of the disorder and its persistency or continuance; that in the slighter forms the mildest preparations, such as grey powder or blue-pill, are the best; whilst, in the severer and more acute forms of these disorders, calomel is preferable, often possessing a specific power of arresting or controlling such violent actions, and thus appearing to have the properties of a powerful sedative in such cases.

But, as I have remarked, it must be ascertained, in the first place, that such gastro-intestinal disorder does not depend upon the presence of applied causes of irritation, in any part of the alimentary canal; for the employment of mercurials in such cases is not only often unnecessary, but is sometimes prejudicial. To remove such causes, therefore, or, in other words, to ensure the regular evacuation of the fæcal contents of the bowels, becomes an important indication in the management of these cases; and this should be fulfilled by the most simple and lenient medicines. In all cases in which the constitution is weakly, the blood impoverished, or the digestive organs irritable, active purging is for the most part injurious, and is often attended by a marked aggravation of the uterine disorder. It often happens, too, that the bowels may be purged without being cleared of the fæcal matter which may be detained in them, and thus much harm may be done by the employment of purgatives, without this being compensated by the least possible good. The precise medicine, or combination of medicines, which will best effect the object in view, cannot always be determined in different persons, and therefore it is often better to leave it to the patient,

whose experience may enable her to decide best as to the particular form of aperient that should be employed. In one, a little castor-oil, taken at bed-time, will ensure the desired result; and in another, the milk of sulphur; whilst in some an aloetic or rhubarb pill, taken before or after dinner, will be found to be the most serviceable. Active purging, however, must in all these cases be avoided; and we may safely interdict the habitual use of such medicines as jalap, calomel, salts, senna, black draughts, etc.

II. Tonics. In the next place, it is necessary to adopt measures which are calculated to diminish weakness, on the one hand, and allay morbid irritability on the other; for many of these affections of the digestive organs may be said to be constituted almost entirely of these pathological elements, the amount of disorder being sometimes comparatively trivial, and such as would spontaneously cease, if weakness and irritability were removed. These conditions, then, require to be carefully attended to and corrected; and we have fortunately remedies at our command which subserve both these purposes. The first indication we can fulfil by the administration of various tonics; the latter, by medicines which have a sedative or tranquillising action upon the nerves, or upon the ganglia, whence the nerves of the disordered viscera are derived.

The administration of tonics in these cases is, for the most part, imperatively demanded; not only because the digestive organs themselves are weak and irritable, but because the tone of the nervous system generally is impaired, and because these conditions, for the most part, either originate from, or are kept up by, an impoverished state of the blood. From this cause, the constitution at large is depressed and enfeebled, the nervous system is morbidly irritable, and the digestive organs, participating in this general weakness and irritability, become either spontaneously or readily disordered by the operation of trivial disturbing causes. In the table, published in the former part of this paper, the proportion of cases in which anæmia coexisted with chylopoietic disorders is very considerable, amounting to 87 out of the entire 100; and if the statements and representations of patients could be implicitly trusted to, and correctly interpreted, it would appear that anæmia is a frequent antecedent, as well as concomitant of such disorders. Whether, then, we look to the pathological condition of the digestive organs in these cases, to the state of the nervous system with which they are associated, or to the character of the blood, we see in each and all of these circumstances, individually as well as collectively, a necessity for these measures, or such as are calculated to impart strength and vigour to the constitution, and improve the quality of the blood.

But the exhibition of tonics, just as the exhibition of alteratives and of aperients, requires much circumspection. They are, for the most part, inadmissible, when there is much coexisting disorder; they should be given guardedly when this exists in a moderate degree only; while they are most beneficially given where weakness and irritability are the sole pathological conditions which prevail. Again, the form of tonic to be given requires some consideration, as well as its dose, the periods at which it should be taken, and the nature of the concomitant uterine affection. In simple irritability and weakness of the

digestive organs, with which the uterine organs may have participated, and which would be characterised by slight uterine uneasiness, moderate leucorrhœa, and irregular or scanty menstruation, the use of iron is decidedly indicated, and it may be given largely. Probably of all forms, the citrate is the most eligible and efficient, and it should be given in doses averaging from ten to twenty grains, after each principal meal, daily. Where anæmia exists in a marked manner, as is often the case, the latter dose is by no means too large, and, taken as directed, it will sit easily upon the stomach, and occasion no unpleasant effects, whereas one-fourth the quantity, taken before meals, will often produce feverish excitement and headache. Concurrently with this medicine, it is necessary to give an occasional alterative at bed-time, when the tongue has been dry or furred on awaking in the morning; and the bowels should be regulated by some gentle aperient. Besides the direct action of iron upon the blood, which it tends rapidly to improve, it would appear, when so given, to have a specific action upon the nervous system, and more particularly upon the ganglionic portion; hence it will often happen, that the digestive organs will have acquired increased tone and vigour, and that the appetite and digestion will have improved, before the blood has become proportionately altered; and hence, also, an improvement will be observed in the condition of the uterine organs, before any correspondent change can have occurred in the blood.

Irritability and weakness, however, which chiefly indicate, and are benefited by the employment of tonics, seldom continue long without being associated with disorder; and this, if unattended to, will compromise the advantages which would otherwise result from their employment. Weakness and disorder are, in fact, distinct pathological conditions, and often opposed to one another; so much so, that what is curative of the one, will often aggravate or increase the other. In these cases, then, it is necessary to adopt a medium course; and when both weakness and disorder coexist, and require to be concurrently rectified, it is best to combine alteratives and tonics, adapting their relative proportion to the particular requirements of each case, according as either weakness or disorder may preponderate. When disorder greatly preponderates, it will often be the best practice to premise alteratives, aperients, and a restricted regimen and diet, before venturing on the exhibition of tonics. When, again, this is less severe, the two modes of treatment may be combined, alteratives being given at bed-time, while tonics are administered during the day; or, what will often be found to be more useful will be to give the milder tonics, such as the mineral acids, with small doses of the liquor hydrargyri bichloridi, until circumstances will permit the employment of the more powerful. Alteratives and tonics may, indeed, be combined in nearly all these cases with advantage; for weakness and irritability cannot long continue without being followed by disorder; and disorder, for the most part, arises from some antecedent weakness, either of the part or the constitution. Many cases appear to me to have been but little benefited by treatment, because the coexistence of these opposite pathological conditions had either been lost sight of, or not properly attended to or acted upon, in practice.

But the employment of tonics in these cases must be also regulated, in some measure, by the nature of the concomitant uterine affection; for it may happen that this may be such as to forbid their use altogether. In the case, for instance, of active congestion, in that of increased vascular action, and in that of hæmorrhage or menorrhagia, it may be that the use of tonics will be fraught with much danger, notwithstanding the existence of anæmia, by their tendency to perpetuate or increase such vascular actions. Again, there are other instances in which one form of tonic will be useful, while another may be detrimental. Thus in passive forms of congestion of the uterus, in similar forms of leucorrhœa, and in relaxed states of the uterine organs, the most useful tonics are those which are of an astringent character. In such cases, I have found the muriated tincture of iron of extreme efficacy; and it may be rendered less stimulating and more astringent by giving it in combination with the dilute muriatic acid; whilst neither of these medicines, separately or combined, is incompatible, chemically, with the liquor hydrargyri bichloridi. In such a combination, then, we have an efficient tonic and astringent suited to many forms of uterine disease, and calculated to give tone to the capillary system, when congestion or hæmorrhage depends upon local or constitutional weakness; whilst the addition of the liquor hydrargyri bichloridi renders it a mild alterative, suited also to those slighter forms of irritability and disorder of the digestive organs, which so often initiate and maintain similar pathological conditions of the uterine organs.

But lastly, there are cases in which extreme disorder of the digestive organs may coexist with extreme weakness, and in which the one morbid element cannot be treated altogether irrespectively of the other. On the one hand, the amount of disorder renders the use of the more powerful tonics, such as steel, quinine, and the vegetable bitters, altogether inadmissible, whilst the great weakness which coexists, renders the use of alteratives and aperients in some degree hazardous. Take, for instance, the case of a delicate, anæmic girl, whose menstruation has been checked by cold or fright. In such it will almost invariably happen, that the digestive organs will, in the first place, be very greatly disturbed, and that much constitutional derangement will follow upon this, and that it will also maintain a state of general irritation, which will be incompatible with a return of healthy uterine action. Here, if we have recourse to active treatment, such as the free use of mercury and purgatives, for the cure of the disorder, we shall do much harm to the constitution, by increasing the general weakness and irritability. Tonics, on the other hand, are equally inadmissible, from the coexisting disorder, the bad state of the tongue, and the presence of febrile symptoms. In such cases, however, we may do much good by adapting our remedies to the peculiar requirements of such cases. Thus in the mineral acids (and I refer more especially to the nitro-muriatic and the sulphuric), we have sometimes useful and appropriate remedies. With the former, the liquor hydrargyri bichloridi may be beneficially combined; with the latter, the sulphate of magnesia; and, in such combinations, we have a mild alterative and tonic, which is especially suited to those forms of disorder which are under consideration. In farther recommendation of these medicines, it may be added, that the former, given in lemon water, with syrup of

ginger, is almost as palatable as lemonade, and the latter, in the compound infusion of roses, is rather a grateful and agreeable medicine than otherwise.

III. SEDATIVES. The above measures comprehend, then, as it appears to me, those which are especially necessary for the fulfilment of two out of the three indications, which require attention in these cases. I observed that they were constituted, in a great measure, of three pathological elements, viz., weakness, irritability, and disorder. I have referred to the measures which are generally necessary for the purpose of diminishing the former, and correcting the latter; but it yet remains to consider what additional means can be had recourse to for the purpose of allaying morbid irritability; for, in many cases, this will continue in spite of alteratives and aperients on the one hand, or of tonics on the other, and will thus require to be specifically treated —if, indeed, we are possessed of any specific remedies for it. In some cases of the kind to which I refer, there may be acute pain at the epigastrium, or in various parts of the abdomen, constituting, in the first case, gastrodynia, and in the latter, enterodynia. But morbid irritability of the digestive organs may be manifested in other ways than by absolute pain: there may be simply disquietude or discomfort; a sensation of extreme weakness, or sinking at the epigastrium; the sensation of crawling within the intestines, together with many other sensations of an equally unusual character; or there may be an irregular performance of the alimentary functions, and a great disposition to flatulency, or eructations. These symptoms appear to be directly referrible to some peculiar form of gastro-intestinal irritation, not always dependent upon either applied causes of irritation, mere weakness, or positive disorder, and they are, therefore, not readily amenable to measures which would be curative of these. Fortunately, we have a class of remedies which meet the requirements of these cases; and which, in the absence of direct causes of irritation, extreme weakness, or positive disorder, are eminently efficacious. I speak of such remedies as bismuth, hydrocyanic acid, the oxides of various metals, and more particularly those of silver and zinc.

But of all these, there is none which appears to me to be so generally efficacious, and so curative of these forms of disorder, as bismuth. I have found it to allay nervous irritability of the stomach and digestive organs generally, more certainly and expeditiously than any other medicine; and, singular to relate, there is none which exercises such a sedative influence upon irritable conditions of the uterine organs, when these are met with as a consequence of gastro-intestinal disorder—a fact which alone tends to show, that uterine irritability and disorder is often but a reflected consequence of such gastro-intestinal derangement. In uterine hæmorrhages in particular, I have found it strikingly efficacious, and often curative of them, when styptics of various kinds had been tried, and had failed. This therapeutical fact is in accordance with another, which has been observed by Sir J. Eyre, who has found that the oxide of silver has also a powerful influence in restraining uterine hæmorrhages of various kinds—a power which it can only possess in virtue of its sedative action upon the gastro-intestinal mucous membrane, or more properly, perhaps, upon the nervous ganglia, whence this membrane derives its nerves. I cannot

doubt its efficacy in such cases, looking alone to the utility of bismuth in them; while it must be quite obvious that the action or *modus operandi* of both medicines, in the cure of these affections, must be of an analogous character. The efficacy of bismuth, again, is not confined simply to irritable or neuralgic conditions of the stomach. It is equally curative of irritable affections of the intestinal canal, such as pain, cramp, spasm, flatus, colic, or diarrhœa, when these are not dependent upon applied causes of irritation, or mere weakness or disorder, but depend upon morbid irritability of the mucous membrane, which, although not always, is, sometimes, a consequence of these causes, and as such, may continue long after they may have passed away.

The oxides of the metals are also serviceable in these cases, but more especially those of silver and zinc.

Hydrocyanic acid has enjoyed a considerable reputation in painful and irritable states of the stomach; but, as my experience of it has been more extended, I have become more and more sceptical as to its actual value. I was at one time impressed strongly with a sense of its utility, from the testimony born to its efficacy by numerous authors; but I have been so frequently disappointed in its effects, that I seldom trust to it alone, or administer it except in combination with medicines calculated to serve the same purposes. It is, however, a favourite remedy with many practitioners of deserved reputation, and therefore should not be hastily condemned: possibly its uncertainty may depend upon the manner in which it is prepared by different chemists, and its ready tendency to decompose, rather than upon any positive deficiency of curative power which it may possess.

I have thus noticed the chief indications which appear to me to require attention in the treatment of the disorders of the digestive organs which are under consideration, and the particular means by which these indications should be fulfilled. I have pointed out the coexistence of at least three pathological elements in these cases, namely, weakness, irritability, and disorder. I have, moreover, endeavoured to show that each of these conditions requires to be concurrently attended to and corrected; and I have expressed the opinion, that in proportion as these requirements are more or less perfectly accomplished, will our success in the treatment of co-existing or consequent disorders of the uterus be more or less perfect. But, it must be added, that the exclusive treatment of disorders of the digestive organs will not alone be curative of such diseases; because they often originate from, and are kept up by others, which, concurrently with those of the digestive organs, maintain a state of general irritability of the system which is incompatible with the return of healthy uterine action; and, if these causes in the aggregate are not adequately attended to and removed, their effects cannot be expected to cease. If anæmia, for instance, coexists with functional disorders of the digestive organs, its removal is as necessary for the cure of the uterine malady, as that of the former. The same remark applies to the coexistence of spinal irritation, which may, and often does, complicate these cases. To show that the disorders in question do really occur in the manner represented, that is to say, for

the most, in an associated form, I subjoin the following analysis of the cases previously tabulated, which gives the following result. Of the 100 cases of uterine disorders of various kinds, 97 co-existed with evident derangement of the digestive organs. Of these 97, in one this co-existed with spinal irritation alone,—in 64 with anæmia; in 22 with anæmia and spinal irritation; and in ten only did it occur without either spinal irritation or anæmia. Such facts point to the necessity of taking a comprehensive view of the causes of uterine disorders, and indicate one source of the difficulty and uncertainty which often attends their treatment.

But, before quitting this part of the subject, there is one pathological state of the alimentary canal which it is necessary briefly to advert to, because, either as a cause or a complication, it occasions or simulates uterine or ovarian disease. I refer to morbid conditions of the colon, whether dependent upon an accumulation of fæcal matter in it, flatus, or other causes. In these, the symptoms which are met with so closely resemble those of disease of the uterus or ovaria, that it is not always easy to discriminate between them; and it was only after having repeatedly seen the apparent symptoms of ovarian or uterine disease disappear by thoroughly unloading the colon, that I became convinced of the importance of this affection in connexion with uterine diseases. The particular condition of the colon to which I refer, has been treated of under the designation of "torpor of the colon". It sometimes depends upon a more general disorder of the digestive organs at large, sometimes upon a deficiency of bile, or, again, upon general constitutional weakness, induced by sedentary habits, night-watching, anxiety of mind, and more especially anæmia. The consequences of these causes frequently is, that the tone and muscular power of the intestine become diminished and insufficient, by its peristaltic action, to overcome the resistance of the sphincter; and hence the evacuations are scanty, and never such as to thoroughly empty the bowel of its contents, although in some cases there may be diarrhœa. This state of the colon is denoted by uneasiness in the iliac regions, by much pelvic pain, which is more especially felt in one or both of the ovarian regions; there is also tenderness on pressure, and a feeling of fulness and resistance from the tension, or accumulation of fæcal matter or flatus in the colon, which will often give the idea of ovarian enlargement: there is, moreover, a weight and dragging in the back, a bearing-down sensation often felt in the uterus, and other symptoms, which clearly point to an irritable condition of this organ as the consequence of this affection. By the use, however, of appropriate aperients and tonics, tepid bathing, and a suitable diet and regimen, the evil may generally be overcome, and tranquillity will be restored to the uterine organs, notwithstanding that the condition of the colon may have existed for many months, and throughout have been the cause of much uterine uneasiness.

I shall next proceed to adduce those practical proofs of the correctness of the preceding views, without which what I have advanced might be very properly received with doubt and hesitation. I have hitherto, in treating of chylopoietic disorders as the cause of uterine affections, confined myself to an examination of those theoretical

considerations which support the views which I have expressed; and I have endeavoured to show that these are not only reconcileable with, but perfectly in harmony with, the facts and principles which have been observed and taught by Hunter, and some of the greatest masters of our art. I have also showed that many circumstances tend clearly to prove that these chylopoietic disorders not only accompany, but, for the most part precede, uterine derangements, and therefore that such antecedence was presumably not merely accidental, but that the former disorder was, in some degree, the cause of the latter. I now propose to strengthen this view, by relating the histories of various uterine diseases which have been treated in accordance with these views; and they will, I think, conclusively establish the fact, that many and dissimilar affections of the uterine organs, some apparently structural, will entirely disappear under the influence of constitutional measures alone, or with very little specific treatment: whilst others, in which extensive organic disease existed, may be rendered so far quiescent as not to disturb the health or comfort of the patient. I had at first intended to attempt some order in the arrangement of these cases; but as I proceeded with the task, I found this more and more difficult, and have finally relinquished it altogether. The fact is, we do not observe those conventional forms of disease in nature which are described in our systems of nosology; irritative disease, for instance, of the uterus, will in one case be manifested by pain, inquietude, and various uncomfortable sensations of the organ. In another, it will be chiefly manifested by leucorrhœal discharges, with little comparative uneasiness; whilst in a third case, irritation will be chiefly manifested by menstrual disorders. I have therefore relinquished the idea of arranging these cases according to their nosological characters.

But believing that irritative disorder is, for the most part, the cause of those particular actions, feelings, or sensations, by which disease of an organ is, for the most part, rendered manifest; and believing also, that even in those instances in which organic or structural changes have taken place, that an organ may yet perform its functions tolerably well, if such irritative disorder be corrected, I have made this consideration the basis of a distribution of these cases; and I have classified them in groups, according to the particular symptoms by which such irritative disorder was manifested. In the first group, I have placed those in which uterine disorder was chiefly indicated by leucorrhœal discharges; in the second, those in which it was principally shown by menstrual disorders; and, in the third, I have placed those in which irritative disorder co-existed with organic or structural disease of the uterus. I shall proceed to narrate cases in this order; and shall commence with those in which leucorrhœa more particularly preponderated over the other uterine symptoms.

(To be continued.)

Chester Place, Hyde Park Gardens, October 1851.

ON THE ARREST OF TYPHUS FEVER BY QUININE.

By ROBERT DUNDAS, M.D., Physician to the Northern Hospital, Liverpool; formerly Surgeon to H.M. 60th Regiment; and late Medical Superintendent of the British Hospital, Bahia.

In the *Medical Times*, I recently endeavoured to impress my professional brethren with the evidence in favour of the efficacy of large and repeated doses of quinine, in arresting the course of typhus fever. My observations have called forth several valuable communications from different correspondents; to many of whom I have not the honour of being personally known. Some have fully admitted the soundness and the importance of the principles which I have laid down; others demand more extended statistical proof; and a third class state, that the quinine treatment had, in their experience, failed, in several instances, to arrest the disease. Such are the chief points in the correspondence with which I have been favoured.

Instead of replying to each inquirer individually, I am anxious to be allowed to make the present explanatory communication to the London Journal of Medicine, as an answer to all.

I have reason to think that my observations on the specific powers of quinine in typhus fever have been to some extent misapprehended. I do not believe, nor have I ever asserted, that large and repeated doses of quinine will *always* cure or arrest typhus fever. I have stated the contrary. And I now ask:—Will quinine always arrest ague? will calomel always salivate? or will opium always induce sleep? Assuredly they will not. Yet notwithstanding exceptional cases, who will question the general—not universal—specific action of these agents? If we take, as an illustration of the failure of quinine in typhus, some unhappy patient from the noisome and unhealthy courts or cellars of a large city — his constitution broken down by intemperance, by "poverty, sorrow, and dirt"—what remedy, or what treatment, can snatch, with certainty, that wretched being from the grave? What I say, and what experience will I believe confirm, is, not that quinine will certainly cure such cases as the above:—no, nor those in whom, from a fatal trifling with worse than useless remedies, the vital fluids have become vitiated, or some vital organ already irrecoverably damaged;—but I do distinctly state, that quinine will, *generally*, cure every case of typhus fever curable by medicine, including a large number of those who would sink under any other form of treatment. I say that quinine, administered as I have directed, will, in the vast majority of cases, stay or avert the symptoms that threaten life,—will, in the forcible words of Mr. Eddowes, as proved at the Liverpool Fever Hospital, "*either cut the fever short, or prevent the accession or increase of the more formidable symptoms.*" And such also are the results in the hands of Dr. Goolden, the experienced physician of St. Thomas's Hospital; of the practice at the Liverpool Northern Hospital; and in the private practice of myself and others.

The dogma so tersely laid down by Pitcairn, and adopted, probably, more from its antithesis than its truth, that "*you may guide a fever—*

you cannot cure it", was obviously based on the hypothesis, that fever originates in a specific poison, and must consequently run a specific course. What wonder, then, that the efforts founded on such premises should have so satisfactorily issued in proving the *incurability* of the disease? The prophecy insured its own fulfilment! Strange, too, that this generally received maxim, so far from being true, ought in fact to be precisely reversed; namely, that you "may *cure*, but cannot *guide* a fever." No human agency can guide a fever. While it continues, some of the symptoms may indeed be moderated, and death, from certain complications, may be averted; but the course of the disease will ever be fraught with danger, particularly if it be long continued, or if any system or any vital organ be predisposed, accidentally or hereditarily, to morbid action. Herein lies the chief danger in fever.

The methods of treatment—if, indeed, some of them deserve this name—have been legion, and of every degree of activity. Irish patients, in their cabins, have been abandoned to cold water: distinguished physicians have, under other circumstances, deliberately adopted and practised the expectant method; while the more heroic and imposing measures of bleeding, brandy, or mercury, have been pursued in clinical hospitals, or in the mansions of the rich. Typhus patients have recovered under each of these modes; but this fact only points out more strikingly the tenacity of life under the most disadvantageous circumstances.

As regards the demand for more extended evidence, and more numerous cases, I must at once confess, that, having observed how all new theories and modes of practice—from Hippocrates, the father of rational medicine, down to the visionary Hahnemann — have been ushered into life by a vast parade of successful cases, I have long regarded this kind of evidence with suspicion, and have avoided it on the present occasion, under the impression that many others might feel as I do. Moreover, when, as in the present instance, any principle admits of ready and conclusive proof, the cumbrous accumulation of cases is a downright imposition on the time and patience of the profession,—supposing, which I much doubt, that they would be read. Is your principle sound? *one* apposite case affords the illustration. Is it false? *a thousand* will not establish its truth. Let it be tested. Perhaps I may be allowed, in imitation of a celebrated northern surgeon, to introduce one other, though somewhat an unusual medical witness. A hospital nurse, E. McCartney, had been so employed for thirty years, and to her was entrusted the administration of the quinine to the patients in the Fever Hospital. Whilst I was discussing in the ward, with Dr. Gee and Mr. Eddowes, the relative results of the treatment, this woman voluntarily observed to us,—"I don't know, but the patients that take the powders (the quinine) get well the fastest. I never saw the patients get well so fast before." So much for a "nurse's tale".

Influenced by the considerations above stated, I have introduced only one case on my own authority; and in that the notes were taken, and the treatment carried out, not by myself, but by Mr. C. J. Evans, then house-surgeon to the hospital, and now apothecary to the Liverpool Infirmary—a gentleman whose competency few will question. I may be allowed to add, that

all the witnesses whom I am about to cite were equally impartial, and thoroughly competent observers.

I shall now submit the valuable evidence of Dr. Goolden, who has also touched on some practical points, to which I shall afterwards briefly advert. In answer to my letter, requesting him to communicate to me the result of his experience of the quinine treatment in typhus fever, he replies:—

"I have only to state that it is so satisfactory, that I should not feel myself justified in treating any serious case of typhus without it. Of eight cases admitted under my care in St. Thomas's in one week—five adults and three children—all with the characteristics of typhus gravior, with one exception, the effect was well marked. Each dose of quinine produced a sensible effect; ten grains in solution, every two hours, to an adult, produced some giddiness and deafness in about thirty-six hours, when it was discontinued; and it was only necessary to give a few doses of nitre and a slight aperient, and nothing remained of the fever but slight debility—debility varied according to the previous duration of the disease. In one case in the hospital, there was so much headache and excitement after each dose, that after the third time it was discontinued, but there was no permanent ill effect; and I am satisfied the course is quite safe to adopt.

"I have met with several opportunities of trying it in private practice.

"In one case, a young gentleman had been travelling with his tutor in Germany, and, when at Giessen, was observed to be out of health; he had loss of appetite, shivering, debility, thirst, and feverish nights. Still, he was able to make the journey home. When at home, he was attacked with severe typhoid symptoms, and I visited him with his medical attendant. I found him with *a black dry tongue, hot dry skin, petechiæ, pulse* 140 *and full, delirium, deafness, and diarrhœa.* He had been in this state several days, when I suggested the large doses of quinine. After an emetic, he took eight grains every two hours. I saw him after the *fourth dose,* and found him *sensible, but rather deaf, the skin bathed in perspiration, pulse sunk down to* 80, *and the diarrhœa checked.* The medicine was continued during the night, and discontinued the next morning, as the surgeon in attendance had had no experience in the quinine treatment, and did not like to carry it on upon his own responsibility. I saw him two days afterwards, and found that he had had no sleep, and the diarrhœa was returning. He took some opium, and repeated the quinine in smaller doses. After a good sleep he awoke much better, and was apparently going on well, when after some days I was sent for, in consequence of a congested state of the left lung, and slight cough. The apex of that lung was quite dull on percussion; no respiratory movement was observed on that side, and bronchophony was distinct, and much large moist crepitation, which made me fear the result, as his mother was the only one of a large family who had not died of consumption. A blister was applied under the clavicle, and he was ordered port wine and nutritious food; and I am happy to say that he is now quite recovered, and the lung perfectly sound. I do not attribute the congested lung to the quinine, but to the fever; but I should be wrong to omit it in making a report.

"I requested the opinion of Mr. Hine, who has the care of the servants of the Great Western Railway at Swindon, including 2,000

families of artizans, etc., among whom typhus is prevalent,—perhaps from want of drainage in the new town,—and his report to me was, that for some time the result was most satisfactory; but latterly he had found that the head symptoms had prevented his using it. He thought that there had been some change in the type of the fever.

"The only drawback that I see to the use of the large doses of quinine, is the necessity for frequently visiting the patients, say several times a-day, which is almost impossible in country practice, and very difficult in town when one is much occupied, and patients may consider such frequent visits to arise from the *nimia diligentia medici*, when the danger is over, and perhaps hardly apparent."

The above statement needs little comment. Of the eight hospital cases of typhus gravior, the treatment was conclusively satisfactory in seven; the exceptional case was also valuable, as proving the perfect safety of the remedy in those individuals where some peculiar condition or idiosyncracy interferes with its curative power. In one case, Dr. Goolden pushed the remedy, not only with perfect safety, but with entire success, beyond what I have ever done, or found necessary; and this fact is very important.

The case of the private patient is highly instructive, as proving, beyond all rational doubt, the specific power of quinine in arresting, *within the short period of eight hours*, the most formidable and alarming symptoms incident to typhus fever: and it is especially important in another sense,—had the fever been prolonged, considering the patient's constitutional tendency, fatal disease of the lungs was inevitable. No other form of treatment, I firmly believe, could have saved this youth's life.

Though deficient in the necessary details, the report of Mr. Hine will fix attention; and I trust that this gentleman, as well as others, who enjoy such extensive and favourable opportunities for observation, will favour the profession with the results of their future experience. I must not pass over the "*only drawback*" urged by Dr. Goolden against the quinine treatment of typhus—and its practical difficulty is indisputable—namely, the necessity for frequently visiting the patient. To ensure success, he should, undoubtedly, be frequently seen, whilst the large doses are being administered; and this, as Dr. Goolden observes, is almost impossible in country practice, and very inconvenient to the well-employed town physician. This difficulty, however, affects in no degree the intrinsic value of the quinine system of practice, or the rationality and truth of the theory on which it is based. At the same time, it must be admitted, that the efficacy of this method of treatment cannot be fairly and fully tried, unless the practitioner, or some competent substitute, exercise a frequent, even though an inconvenient, supervision.

Neither in my own experience, nor in that of others, so far as I am aware, have the large doses of quinine caused congestion of any important organ. On the contrary, by cutting short, or moderating the febrile excitement, they prevent all such congestions, and in this consists the great value of the treatment; seeing that the vast majority of fever cases are carried off by these local affections. In the event of any important organ being involved, I have, with great advantage, resorted to extensive dry cupping, either alone, or followed by a blister.

When the first large doses of quinine have failed to produce their usual curative effect, and the practitioner is obliged to discontinue them, an emetic ought to be administered, as formerly pointed out; and if, after this, the febrile excitement still continue, a full dose of the liquor opii sedativus, with a few drops of nitric acid, will frequently afford the most signal relief, and enable the patient to resume the quinine with every prospect of success.

I would here observe, that the large doses of quinine are not only safe, but advantageous in every stage, and in every form of typhus fever, and that the action assigned to it by Dr. Pereira and others is altogether erroneous. The presence of intense headache, quick and strong pulse, dry and burning skin, dry, chapped and black tongue, intense thirst, hurried respiration, abdominal tenderness, and diarrhœa, do not contraindicate its use. On the contrary, under large and repeated doses, the headache will subside, the pulse calm down, the breathing become less frequent, perspiration will return, the tongue will become moist, and the diarrhœa will be checked.

After the first decided impression has been made on the disease by the quinine, it is invariably necessary to support the patient's strength by good beef-tea, and a moderate allowance of wine. Purgatives, without some decided necessity, should be avoided. When the head continues much involved, a strong capsicum enema—a drachm of the *powder* to ten ounces of water—will often afford relief. The minor adjuvants in fever may also occasionally be resorted to with comfort and advantage.

In these observations I have confined myself to the exposition of general principles, and altogether avoided cases, as I entirely concur with that eminent physician, Dr. William Stokes, whose *Lectures on Fever* are unexcelled in the English or any other language, "that you might as well expect to find two human beings exactly alike, as to find two cases of fever perfectly similar":—the varieties are infinite.

I may here state, that I have repeatedly witnessed in Brazil, seasons of ague, (for the disease prevails in seasons), when quinine, though always curative, appeared less efficient in controlling the disease than at others; and similar modifications will doubtless occasionally occur in the fever of this country. Modifications in the quinine treatment, and probably very important ones, will also, I am satisfied, be introduced through the more extended experience of the profession, though I believe the *principle* will be only confirmed by being tried and tested by different observers.

I shall now briefly repeat the principles I have here, and elsewhere, laid down. The evidence on which I adopted them is embodied in my *Sketches of Brazil*, now in the press, and which in a short time will be laid before the profession.

1. Ague and remittent fever do not originate in malaria or marsh miasm. The doctrine of a special marsh poison I hope to show to be altogether unfounded.
2. Intermittent, remittent, and continued fever, are mere varieties of the same disease. The intermittent constantly merges into the remittent or continued type; and continued fever assumes still more frequently (in Brazil) the intermittent form; and all are curable by the same agents. By the same agents we can arrest

them all. Could this be done if they originated in different *specific* poisons? or, can we ever arrest, by any power, the course of a truly specific disease, as small-pox, etc.?

3. The notion of typhus fever being unknown in the tropics, is altogether ill-founded. The intermittent, remittent, and continued fevers of tropical climates often run into genuine typhus. In Brazil, when the disease takes this course, it is popularly termed "maligna", or "malina", and, in some seasons, is very frequent and very fatal.
4. Bark, duly administered, will generally arrest the intermittent and remittent fever; and typhus fever being essentially the same disease, bark ought to, and will, generally arrest it.
5. Ague will occasionally resist, for many days, the most judicious application of quinine—and finally yield: the same remark applies to typhus.
6. Quinine is more certain in its results in proportion to its early administration; but it is less to be depended on with the aged.
7. The administration of large doses of quinine in typhus, when not curative, is *never* followed by the slightest ill effects.
8. As typhus is, commonly, the more severe form of fever, and the subjects of its attack generally less favourably disposed, so we shall find considerable discrepancy in the several results.
9. Typhus will occasionally resist quinine, and yield to other remedies, and the same holds good with ague; yet who ever associates the latter disease with any other remedy than quinine? And I am firmly of opinion, that the time approaches when the treatment of typhus fever, after ages of vacillation, will be established on the same sure and satisfactory basis as that on which the treatment of ague now rests.

Mr. Eddowes continues to adopt the quinine treatment *universally* with the patients in his section of the Fever Hospital: and Dr. Gee in his wards of the same establishment is now giving it a trial. From two such able observers in such an extensive field, we cannot fail to obtain valuable and correct information.

Since the above was written, my attention has been called to an interesting report, in the last number of the *Medical Gazette*, by Dr. Humble, on fever, as it appeared during the last year, in the Newcastle Fever Hospital. The symptoms, indeed, are pretty much those which commonly characterise the fevers of this country; and I notice the report, chiefly, from the "relapsing" type assigned to the disease.[1]

After alluding to the different periods at which the "relapse" occurred, Dr. H. goes on to state: "In general, this came on after convalescence had commenced, and it did so in spite of any precaution which could be devised against it. . . . . A boy became convalescent, and was ordered to keep his bed until the usual period of relapse had passed over. This was accomplished with considerable difficulty, *as*

[1] Upon Relapsing Fever, so well described, in 1843, by Dr. Cormack, and more recently by Dr. Jenner and others, I have made some remarks in my forthcoming volume.

he felt himself perfectly well; but on the evening of the fifteenth day, the relapse, or, as it might be called, *the second attack*, of fever came on." Alluding to the class of patients, Dr. H. states: "A large importation of Irish were huddled together in great numbers, in a few lodging-houses, situated in the lower parts of the town. . . . . In one family, fever seemed to have been occasioned, or at any rate aggravated, by the want of the common necessaries of life . . . . two of the children presented all the symptoms described as belonging to the famine fever of Ireland. Four cases, after presenting the usual symptoms of continued fever for several days, took on the character of *regular ague;* in one, after twelve days, where the type was tertian; and in three, after ten days, in which it was quotidian", precisely as continued fevers often terminate in Brazil and other southern countries.

What, I ask, would large doses of quinine have done in these Newcastle fevers? But the *word* "relapse" unhappily presents itself, and all reasoning ceases. Speaking of fever, generally, that most accurate of observers, Dr. Stokes, writes: "We seldom meet with a case of typhus without morning remissions; and in some cases the symptoms are aggravated on alternate days, so as to bear some resemblance to double tertian." I have already stated what large doses of quinine would effect in *these* cases.

I now subjoin a letter from Mr. A. B. Steele, late surgeon to the Liverpool Fever Hospital, and medical superintendent of Irish Quarantine and Fever Ships in the Mersey. I had learned, at the hospital, that Mr. Steele had tested the quinine treatment in typhus, and was anxious to obtain the opinion of an authority so competent to decide on its merits. This opinion was kindly and promptly given as follows:

"49, *Russell-street, 24th Oct.* 1851.

"Dear Sir,—At your request, I have much pleasure in furnishing the following brief notes of my experience in the treatment of continued fever with large doses of quinine, as recommended by you, and of which I was only informed a few days ago.

"The first case was an Irishman, named Lawrence Connor, aged 40, living in 4 Court, Grosvenor-street, one of the very worst streets in Liverpool, and scarcely ever free from fever. I visited him here on Saturday the 18th instant, and found him labouring under the usual symptoms of the low type of continued fever; had been ill seven days; was lying on straw in a corner of the floor, destitute of all comforts, or even necessaries.

"I gave an order for his removal to the Fever Hospital, but he did not go. On Monday the 20th, I was again called to him. He was now so much prostrated, that I should have considered it hazardous to remove him. There was great nervous and muscular debility; skin hot and dry; suffusion of conjunctivæ; pulse small and frequent; tongue protruded with difficulty, very dry and brown; delirious, especially at night; can scarcely answer questions. I ordered one drachm of disulphate of quinine in six powders, one to be taken every two hours.

"On the 21st, I found the patient considerably better. The skin was moist; pulse softer, fuller, and less frequent; tongue readily protruded, moist, and whitish; the brown fur had quite disappeared; delirium stated to be quite removed; expresses himself better. The quinine

in ten-grain doses was ordered to be continued, and wine and beef tea to be given. These directions were not properly carried out during the following days, and a partial relapse has been the result; the tongue becoming rather dry and brown; the prostration returning; but still the patient is now (25th) in a far more favourable condition than he was anterior to the administration of the quinine.

"The second case, a woman named Galagher, 14 Collingwood-street, had been labouring under fever for several days. On the 20th, I found her in a state of great prostration, with well marked symptoms of low fever, with, I believe, pleuritic complication. The condition of the patient did not admit of auscultation, or a minute examination. General symptoms very similar to the first case. I ordered quinine in ten-grain doses, and a blister to the chest. The next day, she expressed herself much better; the symptoms had evidently given way. The quinine was continued, and she is now in a fair way of recovery.

"I have tried the plan in a third case of low continued fever, with dry brown tongue, etc.; but unfortunately, from the first, the medicine was not given regularly, or in the quantities ordered; still, what would be considered a large quantity of quinine was taken, and with a decidedly beneficial effect, although not to the same extent as in the other two cases.

"In the first case, the decided effect on the objective symptoms of the disease, *in twenty-four hours*, was so striking as at once to convince me of the value and importance of the remedy; and this improved condition was produced without the collateral advantages of *ventilation, cleanliness, nursing, nutritious diet, or stimulants*,—a fact which greatly enhances the value of this mode of treatment, in the hands of those who, unhappily, have to contend with the disease under the most unfavourable circumstances.

"I have witnessed the results of various methods of treating fever, in several hundreds of cases, during the epidemic of 1847, in our Fever Hospital, and on board the Fever Ships in the Mersey, and subsequently in the town; but I have never found any remedy, or remedies, which appeared to me to cut short the disease, or modify the symptoms, in the same decided manner in which the quinine has done when fairly tried.

"I hope shortly to be able to give you reports of more cases, as I shall continue to adopt your system, the importance of which cannot, I think, be overrated. "I remain, etc.,

"A. B. Steele,

"*Late Surgeon to the Fever Hospital, Medical Superintendent of the Irish Quarantine and Fever Ships in the Mersey.*"

"P.S. I forgot to state that Lawrence Connor had, by mistake, fifteen grains instead of ten grains of quinine for the first four doses."

I have just received the following communication from my accomplished friend, Mr. Eddowes, which, with his valuable cases, prevents the necessity of my adverting (as was otherwise my intention) to the very important question of *typhus with complications*. By the kindness of Dr. Gee and Mr. Eddowes, I observed these cases whilst under treatment, and to both gentlemen I am, for this advantage, very deeply indebted.

"*Liverpool Fever Hospital, Nov.* 8, 1851.

"DEAR SIR,—In reply to your note of yesterday, I beg to state that my opinion of the quinine treatment is unchanged.

"In one important practical point, I entirely differ from Dr. Goolden and yourself. I do not consider that the quinine treatment requires, for its successful employment, any special supervision. For all practical purposes, *one* visit daily to the patient has been found sufficient in the hospital, where the ten grain doses have been given every two hours, for many days, without any inconvenience.

"I quite agree with Dr. Goolden (judging from the cases under Dr. Gee, and in my own charge), that the treatment appears to be altogether free from danger.

"The quinine has been used here in fevers, complicated with chest affections, etc. I enclose for your satisfaction the notes of two cases (*ex multis aliis*), and should you desire any more, you can have them.

"To Dr. Dundas. "I remain, etc., W. EDDOWES."

"CASE I. TYPHUS IN AN EPILEPTIC—ERYSIPELAS SUPERVENING—CONVALESCENCE ON THE FIFTH DAY OF TREATMENT. Richard Lewis, aged 30, a painter, has had colic and wrist-drop; has had epilepsy for seven years, having two fits a month. The epilepsy occurred a month after the attack of colic. His general health is good.

"*Present Attack.* Has been ill more or less for three weeks, but confined to bed for five days only: he had been under treatment, and had got worse.

"*October* 18. *Present State.* He complains of deafness and frontal cephalalgia; is propped up in bed, which, he says, eases the great headache. He passes restless nights; the countenance is flushed; the respiration hurried, 32; the pulse 106, jerking and weak; skin hot and dry; tongue dry, and brown in the centre, moist at the edges: there is tenderness upon firm pressure over the hepatic region. He was directed to have ten grains of the disulphate of quinine every two hours; four ounces of brandy daily; milk diet, beef-tea, and arrowroot.

"*October* 19. He sleeps better; the head is easier than yesterday; is not propped up as before; the breathing is easier; the tongue as before; a dusky erysipelatous flush is appearing on the cheeks and forehead. He was ordered to continue the remedies, and apply flour to the erysipelas.

"*October* 20. The headache is less, but he spent the night restlessly; the face is swollen; the breathing natural; pulse 96; tongue as before. He says that he "feels quite well, except the soreness of the head and face." To continue the quinine, etc.

"*October* 21. The deafness is nearly gone; the tongue moist; he was restless at night; headache quite gone; pulse 80, natural; skin cool, covered with a perspiration; the erysipelas is better. The medicines were continued.

"*October* 23. He was convalescent; and was directed to take ten grains of quinine three times a day.

"CASE II. PETECHIAL TYPHUS—PLEURITIS AND BRONCHITIS—CONVALESCENCE ON THE FIFTH DAY OF TREATMENT. *October* 23. Mary Maloney, aged 15, of good general health, has been ill five days; the skin is hot and dry, with petechiæ; she has great thirst; restless nights; slight headache; tongue coated with a white fur; loss

of appetite. The pulse is 100, natural. ℞ Ipecac. gr. xv., antimon. potass. tart. gr. i., statim sumendus. Postea sumat quinæ disulph. gr. v., secundis horis. To have milk diet, arrow-root, and beef-tea.

"*October* 14. She is breathing quickly; the pulse is 120, jerking and weak; the tongue white at the base; she has pain in the left inferior mammary region. In front, the chest is clear on percussion; there is sibilus on the right side, also on the left, with occasional cooing rhonchi. To the left of the cardiac region, is a dry friction sound, loudest during expiration. Behind, the left base is resonant, but less so than the right; the respiratory murmur is faint throughout. The friction sound is audible from the supra-spinous fossa to the base; mucous rhonchi are audible over the whole of the right side. To continue the quina. ℞ Ung. hydrargyri fort. ʒij., pulv. camphoræ ʒ ss., p. opii. ʒ j. M. Sæpe lateri sinistro infricandum.[1]

"*October* 15. The pain in the side is easier; the respirations lower; pulse 118; skin hot; friction sound behind as before; no increase of dulness; friction sound in front moister. Continue the quina.

"*October* 16. The breathing is easier; the pulse softer and more natural; the countenance improving.

"*October* 17. Pulse 112, soft and natural; the skin moist; no cough; no headache; breathing natural; petechiæ fading; she takes food, and says her tongue is sore. The quinine was continued.

"*October* 18. She is convalescent; the tongue is clear; the countenance natural; pulse 84. She says she feels well. The friction sound is still audible. She had no relapse.

"There were two other patients in the same ward with the same complication: the above treatment was adopted, and the recovery was as speedy.

"Perhaps it may not be uninteresting to you to know, that there have been two cases of typhus occurring in pregnant women. The quinine was administered—in the one case five, and the other ten grains—every two hours. They both recovered without any ill effects."

I have lately conversed with several able men of great experience—Dr. Ewing Whittle of the South Dispensary, amongst others—who have observed fever on a large scale, and who are of opinion that no reliance can be placed on the "eruptions", to which many distinguished authors attach so much value, as diagnostic of the different fevers. They consider the character of the eruption as dependent on epidemic constitutions, idiosyncrasy, and atmospheric and other influences. All are aware of the numerous "rashes" which supervene on derangement of the digestive functions from the use of certain medicines, articles of diet, etc., in different constitutions, and at different seasons.

As regards the rosy lenticular rash, deemed peculiar to typhoid fever, all tropical practitioners must repeatedly have observed these spots in protracted cases of dysentery; and I have myself witnessed all the eruptions described by authors as *pathognomonic* of the several fevers, displayed, in the same patient, at one period or other of his disease. There is now a patient in the Liverpool Fever Hospital, A. B., who presents an abundant "*mulberry rash*", which quite disappears on pressure.

[1] From a formula recommended by Dr. Blakiston.

There is, also, at the present moment, another patient in the Hospital (James Moore), in whom we have conjoined the mulberry rash, the rosy lenticular rash, and "true erysipelas" — the latter classed by Dr. Watson, one of the latest and best authorities, with the contagious exanthemata—as "a specific disease, running a definite course, and attended with an eruption".

Now, in this instance we have, according to authority, three distinct morbid poisons—the typhus, the typhoid, and the erysipelatous—contending for mastery in the same unhappy individual, and all running their regular course, unchecked and unmodified in the slightest degree. Does the history of other morbid poisons present us with anything analogous?

On the authority, indeed, of Carmichael, a "plurality of venereal poisons" was at one time pretty generally admitted by the profession; but was finally exploded by M. Ricord, of Paris, who, on one occasion, exhibited, with a smile, to Mr. Carmichael himself, his *four* distinctive eruptions classically designed on one and the same patient.

This *argumentum ad hominem* did not, I believe, prove altogether conclusive to Mr. C., but perfectly so to every one else; and the "plurality of venereal poisons" soon disappeared.

All must admit that our lot is cast in revolutionary times. I, however, as a loyal citizen of the republic of medicine, have now discharged my duty in handing over "the quinine system", and the principles on which it is based, for trial before the "legal and constituted authorities".

Like other arch-revolutionists, the present doctrine is earnest in its *promises* to "benefit the public": I have not, however, allowed its justification to rest solely on my own testimony to character—naturally open to challenge—but have adduced other, and unimpeachable evidence, and I now await with confidence the verdict; for although the profession be a republic, and its decrees too often tinged by human infirmity, I firmly believe that its final judgments are never wanting in calmness, and justice, and truth.

An incidental interest attaches to the doctrine now advocated, namely, that it will afford an opportunity for testing the value of the infinitesimal doses of homœopathy with doses even larger than those commonly employed by regular physicians. Let an adequate number of fever cases be selected; place them side by side in the same room; let six be treated on my plan; six infinitesimally; let competent individuals (not including myself) be appointed on either side to take the notes, day by day, administer the remedies, and report the results; and on these results I am willing to stake, absolutely, my own professional reputation, and the reputation of legitimate medicine, so far as that can be staked by such an humble individual as myself. I entertain no doubt that the authorities of the Fever Hospital, or of the Infirmary, the Northern or the Southern Hospitals, or the Dispensaries, will readily afford the means of testing by direct comparison, that which I believe, with the rest of the profession, to be a dangerous delusion, but which has obtained sufficient extension to render its refutation an object of public interest. To this "experimentum crucis" no honest homœopath can object.

Canning-street, Liverpool, November 1851.

BIBLIOGRAPHICAL RECORD.

A Practical Treatise on the Diseases of the Lungs and Heart; including the Principles of Physical Diagnosis. By Walter Hayle Walshe, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in University College, London; Physician to University College Hospital, etc. pp. 580. London: 1851.

This work is divided into two parts; the first treats of the Physical Examination of the Lungs, Heart, and Great Vessels; and the second is devoted to the Diseases of these organs.

The first part is divided into two chapters. The first chapter treats of the Physical Examination of the Lungs, by inspection, application of the hand, mensuration in rest and in motion, percussion, auscultation, and succussion; and concludes with remarks on the determination of the situation of surrounding parts and organs. Dr. Walshe has written it in an instructive style; and has, as in the rest of his work, condensed a good deal of information in a small space. We can afford room for only a few extracts.

Under the head of Motion, the author observes that, "in *ordinary* breathing, which is mainly effected by the descent of the arch of the diaphragm, the amount of abdominal is greater than that of thoracic-expansion movement; and the former commences sensibly before the latter. This is true, however, only of adult males; in females, the costal expansion (especially superiorly) is greater than the abdominal—a difference which I presume to depend on the constraint of the lower chest and upper abdomen by stays, and other articles of dress.[1] In *forced* breathing, in both sexes, the thoracic movement is greater out of all proportion than the abdominal; and, even in the male, the expansile action commences superiorly." (p. 17.)

Mensuration is treated of as applied in rest and during motion. In mensuration during motion, Dr. Walshe regards Dr. Sibson's chest-measurer, though liable to fallacies, from the forward motion not always accurately expressing the expansibility of the chest, and from other causes, as furnishing superior indications to those furnished by application of the hand, in localising with precision deficiency or excess of antero-posterior motion. The amount of inspiratory expansion and expiratory retraction of the chest and abdomen is measured by a graduated double tape: the expansion, in the healthy male adult, with a circumference of thirty-three inches, is about a quarter of an inch, which is shared equally between the two sides. "In forced inspiration, the circumference is increased by from one and a half to three inches, and is somewhat greater on the right than on the left side—the deficiency on the latter side mainly depending on the heart. The total circular difference between forced inspiration and forced expiration, ranges between two and a half and five inches." Forced breathing has scarcely any influence in expanding the abdomen.

In disease, mensuration ascertains the amount of deficiency of expansion; and is considered by Dr. Walshe as a valuable means of examination. In

[1] In an Appendix, Dr. Walshe says: "The observation of a considerable number of female children, between the ages of four and ten, who had never worn stays, leads me to the conclusion that, independently of any extraneous influence, there is proportionally more infra-clavicular movement in the female than in the male. But indubitably the main source of the excess of infra-clavicular movement, in the adult female, is due to the use of apparatuses interfering with inferior costal and phrenic action. The male dog breathes exactly like the human male, almost wholly with the abdomen, the chest rising inferiorly after the abdomen; the action in the female dog is very closely the same."

some instances, however, he observes, "the measured range between forced expiration and forced inspiration may be the same on the two sides, and yet the accompanying change of volume of the two lungs may be very different in kind. On one side, the play may be chiefly effected by the ready inspiratory expansion of the lung; on the other, by the great efficiency of expiratory contraction. In the former case, the lung maintains its relative efficiency by the power of taking in beyond its medium quantity of air; in the latter, by its power of expressing air, which in ordinary breathing stagnates within it: in the former case expansibility, in the latter elasticity, predominates. Here are two very different conditions of lung, most important to be distinguished, but which have hitherto never been made the subject of *clinical* study. The difficulty of the study is, it is true, extreme, from the nicety required in fixing the standard of comparison, namely, the medium or tranquil state of the chest. My observations on this matter are as yet too limited to justify me in announcing general conclusions; but they prove to me that, with care, the inquiry may become rich in results." (p. 35.)

Percussion. Dr. Walshe objects to the terms *dull* and *clear*, as applied to the percussion sounds; but retains them, because they are generally understood, and because it is very difficult, if not impossible, to substitute correct scientific terms for them. He also objects to the use of the term *dull*, as applied to "little" or "no" sound; for it is not in intensity that dull sounds differ from clear ones, but in duration and pitch. Hence he understands by what is practically called clearness, continuousness of sound; and by dulness, non-continuousness; and, as continuousness of sound depends on the elastic vibratile character of the material furnishing it, the inference is, that when dulness exists, the material struck is either inelastic, or the vibration is suddenly stopped by some extrinsic influence. Clear sounds, as those of the chest, approach in character to tones; and, under certain circumstances, the pitch can even be assigned—they become notes.

Passing over the author's instructions for the method of performing percussion, and the nature of the sounds elicited in various parts of the chest in a state of rest, we find the following remarks on the modification of the results of pulmonary percussion by inspiration and expiration.

This may occur in three ways. "1. By altering the volume of the lungs; 2. By altering their density; 3. By altering the position of the heart and abdominal viscera. 1. At the close of an ordinary expiration, the right lung extends downwards as far as the sixth rib in front, and the eighth laterally. The lower edge of the left organ, sloping abruptly outwards and downwards from the middle line on the level of the fourth cartilage, again turns inwards a little, and then passes outwards, reaching laterally the eighth rib or interspace. From numerous trials on the dead subject, where no cause existed to modify materially the volume of the lungs, I infer that, in expiration, the lungs are from one to one and a half inches apart on the level of the second cartilage, and four and a half inches apart on the level of the fifth. From their lateral aspect, the lower edges curve downwards and backwards, reaching the ninth interspace or tenth rib, especially close to the spine. During full inspiration, the lungs extend downwards in all directions somewhat further than the limits just mentioned; the inferior edge is then carried about an intercostal space and half lower than after ordinary expiration, and proportionally still lower, when the lungs have been forcibly emptied of their air. At the same time, the space on the left of the sternum, where, after expiration, the heart is in contact with the thoracic walls, becomes filled with lung.

"2. The density of the pulmonary tissue being in the inverse ratio of the air it contains, it is plain that the percussion-sound must be rendered duller in any given point of the chest by a full expiration. In other words, the sound yielded will vary in clearness according as percussion is performed at the close of inspiration or of expiration. The duration of the sound, and the

sensation of elasticity perceived, vary, in the ordinary way, as the modifications of clearness.

"3. The depression of the dull-sounding spleen and liver attending inspiration, replaced as they are by expanding lung, tends during that act to increase the clearness of the percussion-sound in the lower regions of the thorax; the influence of the similar locomotion of the stomach and intestines will vary with the filled or empty state of these viscera. The heart, pushed downwards and inwards, and receding somewhat from the chest-wall during inspiration, where its place is taken by the inflated lung, gives dulness of less extent and lower site than in expiration." (pp. 53-5.)

In consequence of this triple influence of the respiratory acts on the results of percussion, it is advisable in all cases, and absolutely necessary in delicate ones, that the respiration be at the same stage, when the two sides of the chest are percussed comparatively. The end of a full inspiration is best; when the patient can be made to hold his breath.

The alterations in the percussion-sound, produced by disease, are considered under the heads of statical signs, and dynamic signs.

The statical signs are: 1. *Diminution of clearness*, gradually passing into perfect dulness,—the *duration* of the sound being proportionally *shortened*, and the *sense of resistance increased*. It occurs whenever the density of the materials underneath the part struck is increased. 2. *Increase of clearness and of duration*, with *decrease of resistance*, or excess of elasticity. This is noted, where the relative quantity of air in the chest is increased, but not so far as to interfere, by tension of the walls, with their vibration; as in pneumo-thorax, hydro-pneumo-thorax (acting here in the upper part of the chest), in atrophy, hypertrophy, and emphysema of the lung. Extreme anæmia also, by lessening the relative quantity of blood in the lung, may, as suggested by Dr. Stokes, increase the clearness of the percussion-sound.

3. *Increase of clearness and of duration of sound*, with *increased resistance of walls*, is observed where there is a surplus of air in the subjacent part, with considerable induration of tissue between the surface and the part containing that surplus,—a combination of conditions met with where a superficial cavity in the lung has a thin, indurated, and adherent external wall. 4. Alterations in quality are referred to these types: (*a*) Wooden; (*b*) Hollow; (*c*) Tympanitic. These are described at length by the author. The dynamic signs arise from perversions or impediments of the natural modifications of percussion by the act of respiration. Few of these signs are of practical importance, but some of them occasionally prove valuable.

1. The volume of the lung will not be increased during inspiration in cases of hydrothorax, pleuritic effusion, and pneumothorax; in emphysema, and in obstruction of the chief bronchus, either from external or from internal causes. In these cases, also, the air, which in health should escape, still stagnates within the chest, and hence there will not be a sufficient reduction of the area over which pulmonary resonance is heard.

2. The clearness of percussion, as increased during full inspiration, may be affected. Certain states of disease give rise to a comparatively deficient increase of clearness at the end of a full inspiration on either side, the sound being equally clear on both in ordinary respiration. Again, the percussion-sound on expiration may be disproportionately dull on one side. Both these signs sometimes give very satisfactory results in cases of small irregularly scattered indurations, tuberculous or otherwise, of either apex. Other states of the lung—as emphysema and dilated bronchus—interfering with the expulsion of air from the vesicles, give rise to a comparatively deficient diminution of clearness at the end of full expiration: and the same result will occur if there be air in the pleura.

Resistance. Dr. Walshe believes the amount of resistance offered by the chest during percussion to be often of practical importance in diagnosis "There are cases", he says, "of not very rare occurrence, in which erroneous

inferences would almost inevitably be drawn from the sound elicited by percussion, were not these corrected by the information derived from the degree of resistance felt by the fingers. Take the case of a cavity seated close to the surface ; the unnatural clearness of sound which sometimes distinctly exists over such cavities (quite independently of tubular or amphoric quality) might not only lead to an incorrect estimate of the state of the subjacent part, but also to the inference that the lung, in reality least affected, was the most diseased. The sensation of hardness and firm resistance experienced by the fingers at once discloses the true cause of the unusual clearness. Besides, the cases are extremely numerous in which it is satisfactory to have the corroborative evidence, furnished by the state of resistance, in favour of the evidence drawn from the sound. That doubt often exists as to the state of the sound on the two sides, is unquestionable ; and, in these cases, the condition of the subjacent parts may frequently be settled by taking into consideration the amount of resistance. To those persons whose sense of touch is more delicate than that of hearing, this source of diagnosis is of especial value.

" The resistance depends on the state of the contents and of the walls of the chest. All conditions lessening the relative quantity of air in the lung, while they deaden the sound, increase the resistance. All conditions which conversely increase the relative quantity of air, decrease the resistance, while they increase the clearness of the sound : pneumo-thorax is the principal disease. But the walls of the chest may be so stretched in that very affection by excessive accumulation of air, that the resistance becomes extreme, though the sound continues clear. Here the state of the walls themselves modifies the resistance ; as it does likewise where solid or liquid matters accumulate in their substance, where the periosteum thickens, or the ribs either enlarge, or (as in the retraction period of chronic pleurisy) become unduly approximated to each other." (pp. 66-7.)

Auscultation. Dr. Walshe thus concisely states his views on the much debated question—the relative merits of hollow and of solid stethoscopes. " From trials with hollow and solid cedar and ebony stethoscopes, I have come to the following conclusions :—That, with the hollow instrument, the respiratory murmurs appear stronger and more open in quality,—with the solid, weaker and sharper, so much so, that a bronchial character may be simulated ; that cavernous phenomena lose, in some measure, their hollow quality with the solid instrument ; that friction phenomena are sometimes materially better heard with this ; that the natural vocal resonance over the trachea is hollower, graver, and better articulated with the hollow cylinder ; and that the resonance of the observer's own voice, as he speaks, while auscultating the chest of another person (autophonia) is materially more intense with the solid than with the hollow instrument." (pp. 69, 70.) Dr. Walshe points out the precautions to be observed in the performance of auscultation, both as regards the observer and the patient.

The sounds discoverable by auscultation of the lung in disease are described under the following heads, which we exhibit in a tabular form, for the sake of conciseness.

A. 1. Modified Pulmonary Murmurs, or species of unhealthy respiration distinguished by changes of

- (α) Duration and intensity
  - (a) exaggerated respiration
  - (b) weak respiration
  - (c) suppressed respiration
- (β) Rhythm
  - (d) jerking respiration
  - (e) divided respiration
  - (f) altered ratio of inspiration to expiration.
- (γ) Quality, and other properties
  - (g) harsh respiration.
  - (h) blowing
    1. simple
    2. cavernous
    3. amphoric

- A. 2. Adventitious sounds, produced within the thorax by the act of breathing
  - (*a*) Originating in the air-passages — Rhonchi or rattles
    1. Sibilant
    2. Sonorous
    3. Crepitant — (*a*) Primary; (*b*) Redux
    4. Subcrepitant — (*a*) True; (*b*) Liquid
    5. Dry crackling
    6. Humid crackling
    7. Mucous
    8. Cavernous
    9. Dry crepitant, with large bubbles
  - (*b*) Originating in the lung-substance (Pseudo-rhonchi)
  - (*c*) Originating in
    1. The Pleuræ
       - Friction sounds: grazing; rubbing; grating; creaking; rumbling
       - Pseudo-rhonchi
    2. The Mediastina
- B. Modified vocal resonance
  - (*a*) diminished: weak; suppressed
  - (*b*) increased: exaggerated bronchophony; *pectoriloquy*; *ægophony*[1]
- C. Modified resonance of the cough (Tussive Resonance): Bronchial; Cavernous; Amphoric
- D. Phenomena common to the respiratory murmurs, to rhonchi, and to the resonance of the voice and cough: Amphoric echo; Metallic tinkling
- E. Sounds of the Heart, and Murmurs, as transmitted through the substance of the lungs.

We must refer our readers to the original work for Dr. Walshe's remarks on the modified breath-sounds and rhonchi—subjects to which, as is well known, he has devoted much attention, and which he has enjoyed extensive opportunities of investigating. The following is his description of PLEURAL PSEUDO-RHONCHI—a phenomenon, we believe, not previously described.

"In the winter of 1842, I made the following observations. In a male adult presenting the most evident signs, both in front and behind, of a cavity at the left apex, an extremely abundant subcrepitant rhonchus occurring almost in puffs, and having the liquid character in a most marked manner, was day after day (during the week previous to death) detected in the entire height of the left side posteriorly. The rhonchus was, however, distinctly more abundant and more liquid (as noted in writing during life) in the upper scapular, and upper part of the lower scapular regions, than elsewhere. As the patient was anasarcous to a high degree (the urine albuminous), and as he constantly lay on the left side, the explanation of the subcrepitant rhonchus naturally suggesting itself was, that it depended on œdema of the pulmonary tissue generally, but most marked at the apex, and there of course affecting tissue between the cavity and the surface of the lung. At the post-mortem examination, however, I found this explanation was inadmissible; for the thin lamella of tissue between the cavity and the surface was as hard as cartilage, and contained not a particle of serosity; nor was

[1] These two sounds are considered by Dr. Walshe to be varieties of bronchophony.

the organ in any part distinctly infiltrated with fluid, being, on the contrary, particularly dry from its excessive induration. But all along the posterior surface of the pulmonary pleura there appeared (in addition to ordinary dense pseudo-membrane) a quantity of fine adventitious cellular tissue, abundantly infiltrated with fluid. Masses of some size were formed from place to place by the accumulation of fluid in the meshes of this cellular tissue, and it was observed by those present (who had not seen the patient during life) that they were much larger than elsewhere at the apex. There was no air either in the cavity of the pleura, or intermixed with the serosity. Now, although it was possible to suggest another explanation, it seemed most reasonable to suppose, under the circumstances, that the rhonchal sound was actually produced in the masses of infiltrated tissue referred to, and therefore outside the lung, and independently of air.

"Subsequent experience has amply proved the correctness of this explanation, and shown that sounds, perfectly rhonchal in properties, are producible whenever adventitious tissue within the pleura is infiltrated with serosity, and the movements of the chest are sufficiently free. The sounds occur in two forms, squashy and crackling. The character of the first is represented by its name, and, coupled with the sensation of extremely superficial site, suffices for its diagnosis.[1] The crackling form, in itself indistinguishable from some conditions of subcrepitant rhonchus, may be diagnosticated by the coexistence of friction-sounds, constant or occasional, and by its being unaffected by coughing. Mere moisture in the plastic matter within the pleura seems enough to give a rhonchoid character to friction sound." (pp. 120, 121.)

Dr. Walshe enters at some length into the theories of the production of Bronchophony, as laid down by Laennec and Skoda. The latter observer opposed Laennec's view that the bronchophony of hepatisation was explicable by the increased conducting power of the solidified parenchyma, on the ground that (1.) bronchophony may in a few minutes appear and disappear over solidified lung, the other physical signs undergoing no change; (2.) when vocal resonance has temporarily disappeared, it may be restored by making the patient breathe deeply; (3.) in pleuritic effusion, the resonance weakens as the effusion (and the solidity of the lung) increases; (4.) if a healthy and a hepatised lung be taken from the body, and, while one person speaks through a stethoscope placed in contact with each organ successively, a second listens through another stethoscope, it will be found that more intense resonance reaches the ear through the healthy than through the diseased lung. Dr. Skoda believes that "bronchophony is really produced by consonance of the air, within the bronchial tubes, with the laryngeal voice"; and he excludes the walls of the trachea and bronchi from all share in the conduction of the sonorous vibrations of the chordæ vocales.

In criticising Dr. Skoda's observations, Dr. Walshe objects to the comparison instituted between healthy and hepatised lung-tissue when removed from the body: hepatised lungs, under this condition, *do* sometimes conduct sound with much intensity. Again, during life, the laryngeal and tracheal walls obviously conduct vibrations; but this is not the case when the lung is removed from the body: and further, "within the body, the contact of a hepatised lung with the chest-wall is more perfect than that of a healthy one; and, admitting that the former is a worse conductor in regard of the condition of its substance, it may be a much better one through the *closeness of its union (especially if adhesive) with the parietes.*

"In seeking for a theory of bronchophony, there are three points to be considered: the conduction of laryngeal voice; its possible intensification within the chest; and the distance at which that intensification (if real)

[1] "The precise spot where infiltrated false membrane exists may be pointed out during life by this sound."

occurs from the part of the chest-walls examined. In regard of conduction, theory would say that, as the human voice is best propagated in air, the more the lungs were rarefied, the higher would its conducting power become ; and, in accordance with this, it is certain that intense bronchophony is sometimes heard over highly emphysematous tissue. But, on the other hand, as the tracheal and bronchial walls themselves vibrate during speaking, any *really solid* material directly connecting a large bronchus with the surface of the chest, must conduct those vibrations forcibly ; and, in accordance with this, we find that wherever solid fibrous structure is seated in the manner supposed, bronchophony of the most intense character is audible. But if the union of the solid material with the bronchus on the one hand, and the chest-wall on the other, be not perfect—if there be any interruption at the planes of union of the conducting materials—the acoustic conditions are completely changed, inasmuch as interruption at the union of media of different densities most deeply impairs the conducting faculty of the series. Here is one clue to the differences in vocal resonance, observed where the physical conditions appear, on superficial view, identical. On the other hand, theory, for the reasons just now adduced, does not teach that, in the variable semi-solid states comprised under the title of ' hepatisation,' conducting power should be affected in an uniform manner, and experiment shews that it actually is not. Experiment, in truth, alone can teach what the force of conduction really is in the various complicated conditions of physical change in the lungs.

" Next, in regard of intensification within the thorax. The thoracic resonance is sometimes stronger than the laryngeal voice ; hence intensification of sound within the chest is real. How is it to be explained ? Skoda's theory of consonance does not seem to meet the difficulty, or rather to go beyond it. For, in the first place, the air in any enclosed space does not consonate with every sound produced at its orifice, but only with the fundamental note of that space, or certain others having a fixed harmonical relation to that fundamental note. Now, when well marked bronchophony exists, it is audible, as I have assured myself, with the various notes of the octave, though most with the low ones. Again, bodies consonate only in unison, or in certain fixed harmony, with the original sound. Now, the pitch of the bronchophonic voice varies irregularly from that of the laryngeal, with which it coexists. Further, it seems doubtful whether consonance could occur in a system of branching tubes, such as the bronchi : and lastly, Dr. Skoda's exclusion of the tracheal and bronchial walls from all participation in the phenomenon is at variance both with theory and experiment. But there is another way in which sounds may be intensified at a greater or less distance from their places of production—by reflection, and by reflections brought to a focus, or *echo*. Now, the conditions of reflection are fulfilled in the hepatised lung ; the tubes along which the voice is transmitted from the larynx are surrounded by semi-solid material, proper (when compared with healthy tissue) to reflect and concentrate the sound ; the air-cells and minute bronchi are closed, to a variable distance, and prevent its divergence. The tubes resemble so many speaking trumpets, and, just as in these instruments, the augmentation of sound (intensification) is produced by reflection from their quivering walls. . . . But, if the reflected vibrations chance to be brought to a focus within a larger tube, then echo will occur, and, as under ordinary circumstances, the echoed may be materially louder than the original sound. But it may be inquired how, upon this theory, is the temporary disappearance of bronchophony explicable ? In the first place, I disagree with Skoda as to the frequency of the occurrence ; I believe intermittent bronchophony to be a most rare phenomenon,—in this respect assimilable to intermittent bronchial respiration. In the second, where it does occur, it may depend on the deadening influence of mucus or blood in the tubes, or an obstruction of a chief bronchus by fluid, or by accidental pressure (glandular

or other) on its external surface. Under the latter circumstances, bronchophony would, probably, (I have not verified this conjecture) be heard at some point of the chest nearer the bifurcation of the trachea ; or it is possible that certain changes of posture, altering the relationship of the reflecting surfaces, might interfere with the production of echo, by preventing the reflected sounds from coming to their usual focus ; or, the position of the auscultator in respect of the focal point might prevent him from hearing an echo really existing. The force of the echo will also rise, the smoother the bronchial walls, and the larger the tubes in which it occurs ; and numerous other circumstances may be conceived, but scarcely proved, to affect the phenomenon. Among these, the composition of the gases within the bronchi (or in the pleura) may, for aught that is known, hold an important place : hydrogen has been proved to deaden sound greatly ; the effect of carbonic acid, when mixed with other gases and aqueous vapour, can only be learned by experiment.

" Lastly, as concerns the distance from the point of auscultation at which the intensification within the thorax occurs ;—the farther away, the less of the resonance will reach the surface ; the amount, however, will be modified by the conducting property of the interposed media.

" These three conditions of bronchophony—conduction of laryngeal sound, intensification of this within the thorax, and proximity of site of the intensification, may or may not be directly as each other ; one may be in a state favourable to, the rest unfavourable to, the production of bronchophony." (pp. 127-31.

Pectoriloquy and Ægophony are next treated of by Dr. Walshe, who considers them as " important varieties of vocal resonance within the chest (bronchophony)."

In speaking of Metallic Tinkling and Amphoric Echo, Dr. Walshe states his belief that these phenomena are fundamentally one and the same. Amphoric echo is produced artificially by blowing, coughing, etc., into a glass decanter, either empty, or containing a little water, so long as the fluid is not agitated ; but, if drops of water, slowly, and at distinct intervals, fall on the surface of the fluid, the ear, applied to the surface of the vessel, recognises the most perfect imitation of metallic tinkling.

The remainder of the observations on the Physical Examination of the Lungs, including some interesting observations on the position of the diaphragm, we must pass over.

The Second Chapter treats of the Physical Examination of the Heart and Great Vessels. It is divided into the following sections : 1. Inspection ; 2. Application of the Hand ; 3. Mensuration ; 4. Percussion ; 5. Auscultation ;—all as applied to the examination of the heart.

In preference to attempting to give an imperfect idea of the contents of this chapter by condensing it, we will extract entire some of the author's observations on the Sounds of the Heart, contained in the section on Auscultation.

" The first of these two sounds, coincident with the systole of the ventricles, the heart's shock against the side, and the pulse (or diastole) of the arteries nearly adjoining the heart, is called the first, or systolic, or (because of maximum force at the lower part of the cardiac region) inferior, sound of the heart. The second of the two sounds, synchronous with the diastole of the ventricles, the recedence of the heart from the side, and the pulseless state (or systole) of the large arteries, is known as the second, diastolic, or (because of maximum loudness at the upper part of the cardiac region) superior, sound of the heart. The soundless period succeeding to the first sound may be called the first, or post-systolic silence ; that succeeding the second sound, the second, or post-diastolic silence.

" If the period of an entire revolution of the heart, that is from the com-

mencement of one first sound to the commencement of the next succeeding first sound, be divided into ten equal parts, about four of these will be found to be occupied by the first sound, one by the post-systolic silence, two by the second sound, and three by the post-diastolic silence. This estimate is, however, only to be taken as approximatively true. When the pulse beats even as much as from seventy to eighty times in the minute, the post-systolic silence is difficult enough of detection; but it becomes obvious, where the pulse does not exceed sixty in a minute.

"An accurate idea of the character of the heart's sounds cannot be given by a single description of them, as heard in any one particular spot: they vary materially at different parts of the cardiac region, both in their positive and relative properties. The least study of the healthy chest will convince the student that the description which it is the habit to apply to the sounds of the heart generally, holds good only when these are heard at the left apex. The sounds require comparative analysis: (*a*) at both sides of the apex-region, and at both sides of the base-region: (*b*) at base and apex on the same sides of the organ; (*c*) at base and apex on opposite sides. Now this is the most difficult of all studies connected with the healthy heart; but it is essential as the basis of observation of the organ in a state of disease.

"(*a*) At the left apex the first sound is dull, measured, booming, prolonged, and strongly accentuated; its commencement pretty sharply defined; its close much less so. Double the length of the second, deeply seated, and of lower pitch than this, it attains its maximum at this apex, in regard of accentuation, prolongation, and measured, booming character, but not habitually in amount of sonorousness. The second sound, only half as long as the first—clear, abrupt, flapping, and short—is more sonorous, more superficial, and of higher pitch than its predecessor. At the right apex-region, the first sound is considerably clearer, shorter, more abrupt, less strongly accentuated, and of somewhat higher pitch than at the left apex-region. This difference of character depends, probably, both on the thinness of the walls of the right, as compared with the left ventricle, and on the parietes being of different conducting power in the two situations: at all events the sound, audible at the end of the sternum, may be fairly referred more particularly to the right ventricle; that near the nipple, to the left ventricle. So, too, the second sound is habitually clearer, and sometimes even of higher pitch, at the end of the sternum, than towards the left apex; this is, however, less constantly true, and I have known the converse to be the case, where no suspicion existed of the existence of dilatation of the left ventricle—where, indeed, the first sound possessed to the full its natural share of dull, prolonged, booming character.

"Passing from the apex to the base, the same kind of dissimilitude, laterally, in the sounds, may be heard,—not indeed precisely at the base, but a little above this, opposite the second interspace, where the aorta and pulmonary artery are placed side by side. The first sound at the right second interspace is commonly duller, of slightly lower pitch, and more prolonged than at the left corresponding point: in neither is it accentuated. The second sounds differ here in the same characters and in the same manner, but to a less degree: they are accentuated in both places, more on the right side than the left.

"(*b*) Let us now examine the two sounds comparatively at base and apex on the same sides of the heart. The first sound, strongly accentuated at the left apex,—prolonged, booming, and dull,—at the left base loses the accent, which passes to the second sound, while this become louder, more ringing, and sometimes even of higher pitch than that at apex. At apex and base on the right side, the characters of the first sound are very similar; it has more accent in the former than in the latter spot, however, both positively, and *à fortiori* as compared with the second sound.

"(*c*) The relative characters of the two sounds at base and apex at oppo-

site sides of the heart (crucially taken, as it were), may easily be deduced from the foregoing account.

"Now, if these statements be correct, it appears obvious that no *single* articulate symbol can be devised, applicable to the heart's sounds in more than one point. The subjoined series is offered for the four points of prominent clinical interest. The acute accent-mark is used to show where the accent falls (twice, when it falls very strongly); the marks of long and short where one or other character is prominent.

	First sound.	Second sound.
At the left apex	″übb	dŭp
At the right apex	úp	tŭp
At the left base[1]	up	túp
At the right base[1]	ub	″tupp

"The eye gathers from these symbols the tendency to equalisation in length of the sounds observable at the bases, as well as the transference of the accent from the first to the second sound at the apices and bases respectively.

"The extent to which the heart's sounds are audible in health, is not subject to any fixed rule. One great mistake,[2] commonly committed by authors who attempt to define it, is not considering separately the first and second sounds. From this omission, the ordinary starting proposition, that 'the heart's sounds are heard at their maximum in the præcordial region,' becomes an error: the second sound is, in truth, heard in nine people out of ten, more clearly at mid-sternum, on the level of the second interspace, than at any point of the præcordial region,—even limiting that region to the space in which the heart is uncovered by lung during tranquil breathing. The thickness of the soft parts, the form of the chest, and many other physical conditions, perfectly independent of disease of any of the thoracic organs, modify the extent of propagation so variously, that there can be no practical utility in laying down rules subject to perpetual exceptions. But the lines of propagation of the two sounds severally agree in most healthy persons, whatever be their absolute intensity at their seat of production; changes in these lines point positively to some modifying cause, and hence their establishment is clinically valuable. Now, the first sound passes slantingly upwards to the left acromial angle, growing weaker and weaker on the way; it loses much more on the way to, and at, the right acromial angle: its propagation backwards is clearest and fullest to the left,—so that while audible at the left back, it may be inaudible at the right. The second sound, with the base-region as its centre, radiates to the right and left acromial angles, with greater clearness to the left than the right; posteriorly it reaches the surface at the right side less clearly than at the left." pp. 189–192.

Great attention has been devoted by Dr. Walshe to the morbid modifications of the sounds of the heart, and to adventitious sounds or murmurs. We quote his remarks on Inorganic Endocardial Murmurs.

"Endocardial murmurs, that cannot be traced to any organic cause after death, or that disappear so completely and permanently during life as to preclude the idea of structural change in their production, are termed inorganic. They are divisible into two sub-classes—murmurs of blood origin, and of dynamic origin.

"1. *Cardiac blood-murmurs.*—An intra-cardiac blood-murmur is of mo-

[1] "The left and right second interspaces close to the edge of the sternum."

[2] "Some authors speak of the sounds being audible in healthy male adults, of moderate stoutness, even *at the right side posteriorly*; others hold that the space over which they are heard *seldom exceeds two square inches!*"

derate or very slight intensity, commonly of medium or low pitch, short or moderately prolonged, of whiffing quality, very easily rendered temporarily harsh by excitement of the heart, and modified in intensity by certain changes of posture. This murmur is, as far as I have observed, invariably basic in seat and systolic in time, produced at the orifices of the aorta and of the pulmonary artery,—with a force at each proportional to the power of its communicating ventricle; scarcely conducted along the aorta at all; frequently audible, on the contrary, at the second left (or pulmonary) cartilage; only in exceptional cases audible below the nipple; and never, within my experience, perceptible as far as the left apex. The site and rhythm of these murmurs, excluding all those of diastolic time and seat at either apex, are of great value in their distinction. To their quality and pitch I attach but moderate importance; for organic murmurs may be soft, and inorganic ones are not very unfrequently rather harsh: while the latter may be shrill, whistling, and of high pitch, and the former are of course frequently of low pitch. Unfortunately there is no character in a systolic basic blood-murmur which positively proves its nature, and distinguishes it, *under all circumstances*, from one of organic source. The distinction is often rather to be made through the absence or presence of venous hum (I do not remember ever to have observed an intra-cardiac spanæmic murmur unattended with venous hum) and the course and duration of the phenomenon, than through its own immediate characters: *permanent* harshness and high pitch are never associated with murmur of blood-origin. If the arteries be the seat, extensively, of strong blowing murmur, without artificial pressure (as, for example, the arch of the aorta, the innominate and subclavian arteries), a co-existing systolic murmur at the mid-sternal base is, in part at least, inorganic; but, on the other hand, the cardiac murmur may be truly inorganic, and yet the arteries be perfectly free from abnormal sonorousness.

"The morbid state of the blood which acts as the most frequent cause of these murmurs is spanæmia,—whether it be that of chlorosis, of malaria, of starvation, of deficient insolation, of hæmorrhage and over-venæsection, of carcinoma, of convalescence from acute diseases, etc. I have occasionally observed it in uræmia; so, too, it occasionally occurs (though to a very slight amount) in the hypinosis of continued fever and the exanthemata, and in the hyperinosis of pneumonia and acute rheumatism, under circumstances excluding more or less positively its dependence on endocarditis. It has been affirmed that plethora, rendering the quantity of blood too great for the cavities of the heart, produces murmur within it: confirmation of the statement is wanting; more especially if we agree with those chemists who maintain that the relative quantity of red corpuscles is increased in plethora.

"The mechanism of these blood-murmurs will be considered with that of the venous class.

"2. *Dynamic cardiac murmurs.*—Under this head murmurs occurring in the heart, through some abnormal state of its action, range themselves. Violent excitement of the organ, whether it act merely by increasing the force of the current, or by disturbing its direction, occasionally produces for the time systolic murmur at the base. I have observed this not only in hysterical females (who, though of florid countenance, might have been slightly spanæmic), but in males with palpitating heart. If the organ be the subject of dilated hypertrophy, palpitation is sometimes, but certainly not always, attended with the same murmur. In hypertrophy with dilatation there is possibly another dynamic source of systolic murmur: from the altered form of the cavities of the ventricles, their contained blood is probably propelled against the edges of the arterial orifices, instead of directly through them; and this misdirection of the current may, very possibly, generate murmur.

"The heart may, probably, also undergo dynamic changes interfering with the closure of its valves, and giving rise to murmurs of the regurgitant

class. A systolic murmur at the left apex is occasionally audible in chorea, disappearing as the disease disappears,—which cannot be referred to inflammation or organic disease of the mitral valve; which cannot be of blood-origin, but which does seem plausibly ascribable to disordered action of the muscular apparatus connected with the valve. The same kind of disorder may conceivably be the cause of certain mitral regurgitant murmurs, attending dilated hypertrophy of the left ventricle, which disappear under treatment.

"In seeking the causes and seat of any given endocardial murmur, the essential points in the inquiry are its relationship to the systole or diastole, and the spot of its maximum intensity on the surface of the chest. Subsidiary conditions of great importance are the direction of transmission, duration, clinical progress, quality, and pitch of the murmur; and, beyond itself, the state of the heart's natural sounds, and the presence or absence of certain audible phenomena in the arteries and veins, or both." (pp. 218-221.)

Having thus glanced at the scientific part of Dr. Walsh's book, we will now proceed to an examination of the practical portion.

The second part is devoted to diseases of the LUNGS, HEART, and GREAT VESSELS; and is divided into three chapters.

The First Chapter contains an account of the DISEASES OF THE LUNGS AND APPENDAGES.

NEURALGIA OF THE LUNGS, PLEURODYNIA, and INTERCOSTAL NEURALGIA, are briefly treated of, and are followed by an instructive description of the symptoms, physical signs, and treatment of BRONCHITIS, in its acute and chronic forms. Two pages of the work are also occupied with a description of plastic bronchitis, a rare affection, anatomically characterised by the formation of solid or tubular concretions of exudation matter of low type (sometimes containing exudation cells) within the bronchial tubes, reaching, more or less extensively, from their finest to their largest divisions. A case of this kind has been recorded, with an illustration of the casts of the bronchial tubes, in a recent volume of the *Transactions of the Provincial Medical and Surgical Association.*

HAY ASTHMA is briefly noticed; and a concise view of INFLUENZA is given. Dr. Walshe is evidently unwilling to remove this disease from the place which it has so long occupied among chest affections; but he appears nevertheless convinced that it is "even in its local manifestations, an affection *sui generis*, and of much more extensive seat (even anatomically speaking), than its classification with bronchitis would seem to signify". And a little farther on he observes: "There are exceptional cases (the same poison evidently being at work), where violent headache, flushing of the face, and delirium with fever, mark its action; others, where the digestive organs alone suffer, and in the upper parts; others, marked by diarrhœa or pseudo-dysentery; and yet others, where erethism or actual catarrhal inflammation of the urinary organs is the main phenomenon." We can scarcely agree with Dr. Walshe, in calling these complications of a febrile disease "exceptional". On the treatment of influenza, the author makes the following concise and judicious remarks:

"The experience of centuries has established beyond question the impropriety of depletory measures in the *treatment* of influenza. The czar of Russia was justified, by the mortality clearly traceable, not only in his own dominions, but in various countries of Europe (England, France, Spain, Italy) to blood-letting, in issuing his Ukase against its employment. I doubt if the occurrence of consolidation-signs even warrants the use of the lancet: such signs are observed chiefly in the aged and exhausted: and I know, from experience, that dry cupping and carbonate of ammonia will remove these signs in such cases; whereas I have never seen any benefit derived from abstraction of blood, either by leeches or cups. Such consolidation is very positively *passively congestive* in the aged and infirm, and is

increased by depressing measures. Should well-marked signs of sthenic pneumonia occur in a young or middle-aged person, leeching or cupping may be advisable ; but even then caution is requisite ; a dozen leeches have, within my experience, produced successive fainting fits in a previously healthy and robust individual. I have never seen a case (perhaps such may be met with in the provinces) where venesection was advisable. Neither should tartar emetic, active purgatives, nor (I think, in spite of the encomiums of Dr. J. Davies) mercury, with a view to its constitutional effects, be employed. The treatment I have found most successful, is as follows :—keep the patient in bed ; open the bowels by some gentle laxative ; give some slightly diaphoretic medicine, in combination (if there be rheumatic pains especially) with colchicum and an alkali ; procure sleep by extract of lettuce or of hyoscyamus ; and allow diluents freely. After the first three or four days, if bronchitic rhonchi exist, a blister should be applied between the shoulder-blades or to the sternum, and an expectorant mixture prescribed. This mixture may with advantage be made somewhat stimulant ; let the vehicle, for example, be partly ammoniacum mixture, or decoction of senega ; lobelia inflata, or paregoric, should enter into its composition. Tonics, iron, and quinine may be given daily during convalescence, unless the stomach have been implicated to any amount. If there be much exhaustion, from the first, sesquicarbonate of ammonia and strong beef-tea should be given without hesitation." (pp. 276-7.)

Syphilitic Bronchitis, and the Narrowing or Obliteration of Bronchi, are next noticed by Dr. Walshe.

Pleurisy. This subject is elaborately treated of. The *physical signs* are referrible to four periods : that of hyperæmia and dryness ; of plastic exudation ; of sero-purulent effusion, with or without dilatation of the side ; and of absorption, with or without retraction of the side. The *diagnosis* is in general simple : but there are several diseases with which pleurisy may be confounded. From plastic pericarditis, plastic pleurisy is distinguished by the respiratory rhythm of its friction-sounds. Friction in the peritoneum, especially at the upper part, is with difficulty distinguished from similar sounds in the lower part of the pleura, as the rhythm is respiratory in both. From pneumonic solidification, acute pleuritic effusion is diagnosed by the disappearance of vocal fremitus ; by the absence of crepitant rhonchus, and of *true* tubular, sniffling, metallic respiration ; by the vocal resonance being dull, or weakly bronchophonic ; by the displacement of the heart and intercostal planes, and the extension of dulness—affected by change of position—across the mediastinum : by the absence of rusty sputa, of acrid heat of skin, and, above all, by the state of the pulse-respiration ratio, which will never be so disturbed as in pneumonia. An enlarged liver will be distinguished by non-protrusion of the lower intercostal spaces, although they are rendered more prominent ; by the clear percussion-sound superiorly, and by the tolerably full amount of respiration audible at the posterior base of the chest. An enlarged spleen, if it be sufficiently large to increase the width of the left base of the thorax, raises the heart, but does not push it aside : it extends far into the lumbar region, and as far as or beyond the middle line of the abdomen : it affects but very slightly the respiration at the posterior base of the chest ; and causes no protrusion of the intercostal spaces. Leucohæmia, if present, may assist in the diagnosis. The distinctive marks of hydrothorax, intra-thoracic tumour, cancerous infiltration of the lung, and tubercle, are also given.

Under the head of *treatment*, Dr. Walshe enters rather fully into the subject of paracentesis thoracis ; an operation which he pronounces as worthy of "being numbered among the valuable gifts of surgery". With regard to the probable success of the operation, the condition of other organs, and the presence or absence of pulmonary tuberculisation, are most important to be taken into consideration : and the operation has been much more successful

in young persons than in those of advanced years. With respect to the period of the disease most favourable for operating, Dr. Walshe makes the following remarks:

"Experience proves, as might have been anticipated, that, when performed at an advanced period, paracentesis is rarely successful; the local changes which then have had time to arise in the pleura, pernicious as these are, are even less subversive of success than the deep constitutional distress entailed by the disease. And yet, to this period, puncture of the chest is often, I might almost say commonly, postponed; it can hardly be matter of surprise, that in some such cases it has appeared to do little more than hasten death. There can be no question that the fitting time for operation has come, when a tendency, insuperable by medical means, exists either to increase or to non-absorption of the fluid. The practical difficulty is, to determine the precise period at which such tendency may be considered to be developed. On the one hand, perseverance in a given mode of treatment has sometimes proved successful, when everything seemed to foretell its probable inefficacy; and, on the other hand, valuable time may be frittered away, and the period at which paracentesis affords real chance of permanent relief but too easily suffered to pass by, from the procrastination caused by a very natural anxiety to give more gentle measures a full trial. A thorough consideration of the whole history of the case, as also of the existing local and constitutional states, is required to enable the practitioner to seize the propitious moment for surgical interference. This difficulty is, unfortunately, not confined to the operation for empyema." (pp. 305-6.)

In operating, as a measure of precaution, a grooved needle may be first introduced; and the best instrument is the trochar, if it be desired to evacuate the fluid by degrees. Under ordinary circumstances, the integuments and pleura should be first incised with a bistoury.

"The first point to be ascertained, in selecting the place for the performance of the operation, is the adherence or non-adherence of the lung to the chest, and, in the former case, the precise limits of the adhesions. It is scarcely necessary to say, that the site of these must be carefully eschewed. When the entire side is free from adhesion, the common advice of surgical writers has been, that the opening be made at the most dependent part of the antero-lateral part of the chest. But undiscriminating attention to this advice, given with the sole view of securing free egress for the pleural fluid, has occasionally led to perforation of the diaphragm and abdominal viscera; even the kidney has been extensively wounded by operators whose practice is to adhere too scrupulously to such injunctions. Laennec recommended the space between the fifth and sixth ribs, a little in front of the digitations of the serratus magnus muscle, as the fittest site for puncture. The importance of opening the fifth instead of a lower space, has been justly insisted on by Drs. Townsend and Stokes, who draw a fair analogical argument in favour of high puncture, from the elevated position in which the discharge commonly occurs, when spontaneous or preceded by the formation of abscess. The opening has sometimes taken place even above the clavicle. If the ribs cannot be clearly distinguished, on account of the presence of marked œdema, some difficulty may arise in fixing upon the spot for incision. Steady and continued pressure with the pulps of the fingers will sometimes enable the operator to discover the edges of the bones, in cases where this would on first view have appeared altogether impossible.

"The place for operation having been duly determined on, an incision of about two inches in length is to be made through the integuments, and the intercostal muscles carefully divided to the same extent. The cutting instrument should not be carried too close to the borders of the ribs, lest the corresponding branches of the intercostal artery be wounded; this statement applies especially to the lower border of the upper of each pair of ribs, along which the superior, and of the two the much larger, twig runs. The division of the

costal pleura itself is by some recommended to be performed with a lancet, but such caution seems useless. When the flow of matter announces the pleura to have been divided, the opening in that membrane should be enlarged sufficiently to give free outlet to the contained fluid.

"If the operator have been unfortunate enough to incise the pleura over the site of firm, thick, and strongly-adherent pseudo-membrane, and in consequence no fluid appear, the line of conduct to be further pursued must vary with the practitioner's confidence in the correctness of his diagnosis in other respects. If he still remain satisfied of the presence of the liquid effusion, the attempt to evacuate this may be proceeded with; if he be apprehensive of having altogether erred, the obvious course is to dress the wound, and avert, as effectually as possible, the ill effects of the unnecessary suffering to which the patient has submitted. In the former case, surgeons have attempted to tear asunder the pleural adhesions,—a procedure utterly unjustifiable: the only admissible modes of acting are, to enlarge the existing opening with the bistoury, or to make a new one. The opening may be enlarged, if the free border of the membranous mass interfering with the escape of the fluid be ascertained to be perfectly close to the angle of the existing wound; under other circumstances, a new incision must be made." (pp. 306-308.)

"Some writers lay very great stress upon the importance of preventing the occurrence of pneumothorax; and there can be little question that the entry of air through the wound is a circumstance which it would be well, if possible, to prevent. But the efficacy of any plan devised for its prevention is extremely questionable. Thus the modifications of the common canula, constructed for the purpose of preventing the occurrence of pneumothorax, have invariably been found failures. The proposal to puncture the chest under water is worth trial. It seems, in truth, well to prevent the ingress of air into the pleural cavity, if possible; and this because the existence of pneumothorax must interfere with the expansion of the lung; and the contact of air with the diseased surface is likely to entail increase of inflammation and decomposition of the fluid retained or resecreted by the pleura. Nevertheless, the prevention of pneumothorax does not by any means appear to be a matter of such importance as considerations of this kind might lead us to expect. In numerous instances, where the physical signs of pneumothorax were distinctly detected after the operation, recovery has ensued.

"Laennec appears to me, as already stated, to have correctly pointed out the description of cases in which it may be advisable to evacuate the contents of the chest, by degrees, and upon successive occasions. Under other circumstances, experience shows that no apprehension need be entertained of ill effects following complete evacuation. Speculative reasons may and have been, by various persons, adduced in numbers in favour of each mode of evacuation; the important point to remember is, that *experience* is in favour of as complete evacuation as possible. Curiously enough, many of the advocates of successive evacuations are at the same time energetic in denouncing the ill effects of pneumothorax; how they reconcile to themselves the recommendation of a mode of operating which doubles, trebles, quadruples, or even still further increases the chances of the entry of air, does not very clearly appear.

"The proposal to ensure the removal of the entire collection of fluid, by drawing off with a syringe any portion of it which gravitates below the opening, is as old as Scultetus. Mr. Jowett and others have proposed modifications of the syringe employed by that surgeon. There does not appear to be any reasonable objection to the employment of these instruments, if they be dexterously introduced and managed; and they may, in some cases, be decidedly useful. Laennec proposed the use of a cupping-glass and exhausting syringe, with the view of drawing off the remains of the fluid, and facilitating the expansion of the lung.

"Is it advisable, under all circumstances, to close the wound after the operation? If the contents of the pleura have been completely evacuated, there can scarcely be any motive for leaving the orifice open. If the evacuation have been only partial, still it is better to close the opening than to leave a canula or tent in it, as the constant renewal of the air in the pleura is decidedly detrimental, and may—unlike entry of air at the first—be prevented by immediate closure of the wound. If, however, any species of canula were devised which would admit of the egress of fluid, and successfully oppose the ingress of air, this objection will cease to exist; and the facility afforded by such an instrument, for the removal of any newly-secreted fluid, will be an important motive for its employment.

"The changes induced by the operation are, or may be, of two kinds; *physiological*, and *pathological*. The former, which are local and general, are as follow: the diminution of the contents of the chest, is, of course, attended with decrease in the dimensions of the affected side. In a case observed by Dr. Townsend, the semi-circumference, which reached sixteen and a half inches before the operation, had fallen to thirteen and three-quarter inches on the ninth day after it. The approximation of the pleural surfaces is rendered manifest, sometimes at a very early period, by the occurrence of friction phenomena; the patient is frequently enabled to lie on the affected side on the day, or even a few hours, after the operation; his dyspnœa is immediately relieved; the state of anxiety under which he laboured disappears; and a sound sleep, the first, possibly, enjoyed for weeks, commonly follows the evacuation.

"Of the *pathological* results, as they may be termed, of the operation, pneumothorax is the most inevitable: the question of its influence on the ultimate issue of the case has already been referred to. The continuance of secretion from the pleural surface for a greater or less period, and hence the constant renewal of empyema, is of very common occurrence. In rare instances, the characters of the newly-secreted fluid remain those of that originally evacuated; in the great majority, they change; the general tendency of the change being of the purulent character. The alteration from the almost purely serous appearance to the purulent is sometimes accomplished in twenty-four hours. When the fluid has been originally more or less completely formed of pus, but of a laudable kind, its conversion into a purulent matter, of bad quality and fetid smell, is not unusually observed. Under these circumstances, the injection of warm water or some other unirritating fluid becomes advisable. Should there be much appearance of putrescency, a small quantity of very weak solution of chloride of sodium may be added. The notion of giving tone to, and diminishing the irritation of the pleura, by injecting tonic preparations, seems of very questionable justness; nor has the practice been attended with sufficiently favourable results to warrant its general employment. Iodureted solutions, or one of nitrate of silver, have more *à priori* reason in their favour.

"In the ordinary course of things, when the case is destined to end by the patient's restoration to health, the wound or wounds in the thoracic walls gradually close, and cicatrisation is perfect within a short period; but in some cases, the opening, instead of closing, acquires the characters of a fistula, which it retains for a variable period, and daily gives issue to more or less pus.

"When spontaneous perforation of the costal pleura has occurred, and a portion of the contents of the pleural cavity escaped through this into the subcutaneous cellular membrane, forming an abscess there, this should be opened without delay, in order to prevent the occurrence of sinuses and burrowing: so well established is this point, that the operation is, under these circumstances, termed *empyema of necessity*.

"Cases of *double* empyema are, as a general rule, unfit for operation, unless evacuation be rendered necessary for the prevention of asphyxia. Should

particular circumstances arise, under which paracentesis might on other grounds become admissible, an interval of time, varying in length with the condition of the patient, should be allowed to elapse between the two operations." (pp. 309-312.)

From the author's observations on PNEUMONIA, we can only afford space for the following remarks on the *seat* of the disease.

Of 1430 cases, 742 were of the right lung, 426 of the left, and 262 of both organs. In 264 cases, the upper lobe was affected 101, the lower one 133, the middle part 30 times. (Grisolle.) The cases of double pneumonia, which furnish 18·3 per cent. of the whole series, were in general not so from the outset; the implication of the second lung was secondary in point of time. This is important; for, in doubtful cases, the existence of the phenomenon at one only, or at both sides of the chest, will aid materially in distinguishing the true crepitant rhonchus of pneumonia, from the sub-crepitant rhonchus of capillary bronchitis. And yet it is very probable that, even by Laennec, double capillary bronchitis has been mistaken for a double pneumonia. Again, the proportion of double pneumonia in the adult does not probably exceed one in twelve; whilst, in new-born infants, the disease is almost always double. Pneumonia commencing about the middle of the lung is rarely primary.

The lobular, interlobular, latent, and intercurrent forms of pneumonia, are briefly but instructively noticed.

GANGRENE OF THE LUNG, HÆMORRHAGE and HÆMOPTYSIS, HYDROTHORAX, PNEUMOTHORAX, EMPHYSEMA, and HYPERTROPHY OF THE LUNG, are next treated of in succession: but we must refer our readers to the original work, with regard to these subjects.

CHRONIC PHTHISIS. This is a subject which Dr. Walshe has had most extensive opportunities of investigating; and with regard to which he has earned a high reputation. We may say, then, in general terms,—for we find it rather difficult to condense the matter so as to retain it in an intelligible form,—that this part of the work fully sustains Dr. Walshe's character as a laborious observer. Passing over, then, a great deal of important matter, we quote the following propositions, in which are embodied some of the most interesting facts, of which the author has actually seen illustrations.

"(*a*) A young adult, who has had an obstinate cough, which commenced without coryza and without any very obvious cause, a cough at first dry and subsequently attended for a time with watery or mucilaginous looking expectoration, and who has wandering pains about the chest, and loses flesh even slightly, is in all probability phthisical. (*b*) If there be hæmoptysis to the amount of a drachm even, the diagnosis becomes, if the patient be a male and positively free from aneurism and mitral disease, almost positive. (*c*) If, in addition, there be slight dulness under percussion at one apex, with jerking or divided and harsh respiration, while the resonance at the sternal notch is natural, the diagnosis of the first stage of phthisis becomes next to absolutely certain. (*d*) But not absolutely certain: for I have known every one of the conditions in *a*, *b*, and *c*, exist (except hæmoptysis, the deficiency of which was purely accidental), when one apex was infiltrated with encephaloid cancer, and no cancer had been discovered elsewhere to suggest to the physician its presence in the lung. (*e*) If there be cough, such as described, and permanent weakness and hoarseness of the voice, the chances are very strong (provided he be non-syphilitic) that the patient is phthisical. (*f*) If decidedly harsh respiration exist at the left apex or at the right apex behind, if the rhythm of the act be such as I have called *cogged-wheel*, and there be dulness, so slight even as to require the dynamic test for its discovery, there can be little doubt of the existence of phthisis. (*g*) If with the same combination of circumstances deep inspiration evokes a few clicks of dry crackling rhonchus, the diagnosis of phthisis, so far as I have observed, is absolutely certain. (*h*) If these clicks on subsequent examination grow

more liquid, the transition from the first to the second stage may be positively announced. (*i*) If there be slight flattening under one clavicle, with deficiency of expansion movement, harsh respiration and slight dulness under percussion, without the local or general symptoms of phthisis, the first stage of tuberculisation cannot be diagnosticated with any surety, unless there be incipient signs at the other apex also ; the conditions in question limited to one side might depend on chronic pneumonia or on thick induration-matter in the pleura. (*k*) The existence of limited, though marked, dulness under one clavicle, with bronchial respiration and pectoriloquy, so powerful as to be painful to the ear, the other apex giving natural results, will not justify the diagnosis of phthisis. I have known this combination when the apex of the lung was of model health, and a fibrous mass, the size of a walnut, lay between the two laminæ of the pleura. I would even go further, and say that the combination in question is rather hostile than otherwise to the admission of phthisis ; as, had tuberculous excavation formed at one side, the other lung would, in infinite probability, have been affected in an earlier stage. (*l*) Pneumonia, limited to the supra and infra-clavicular region on one side, and not extending backwards, is commonly, but not always, tuberculous. (*m*) Subcrepitant rhonchus, limited to one base posteriorly, is not, as has been said, peculiar to tubercle ; it may exist in emphysema and in mitral disease. (*n*) Chronic peritonitis, in a person aged more than fifteen years, provided cancer can be excluded, involves as a necessity the existence of tubercles in the lungs. To this law of Louis's, it is necessary to add the qualification, provided Bright's disease be also absent. (*o*) Pleurisy with effusion, which runs a chronic course in spite of ordinary treatment, is, in the majority of cases, tuberculous or cancerous : the character of the symptoms, previously to the pleurisy, will generally decide between the two. (*p*) Double pleurisy, with effusion, is not, as has been said, significant of tubercle ; for it may depend on Bright's disease. If the latter disease can be excluded, carcinoma and pyohæmia remain as other possible causes. (*q*) If a young adult, free from dysentery, and who has not resided in tropical climates, suffers from obstinate diarrhœa, which goes on month after month, with slight remissions or intermissions, even though there be no cough, he is in most strong probability phthisical. If physical signs, to the slightest amount, exist at either apex, he is, almost to absolute certainty, phthisical. (*r*) If a young adult, free from secondary syphilis and spermatorrhœa, and not dissolute in his habits, steadily lose weight, without clear cause, he is in all probability phthisical, even though no subjective chest-symptoms exist. (*s*) But he is not by any means certainly so ; for he may have latent cancer in some unimportant organ, or he may have chronic pneumonia. (*t*) Nay, more, he may steadily lose weight, have dry cough, occasional diarrhœa, and night-sweats, and present dulness under percussion, and bronchial respiration under both clavicles, and yet be non-phthisical. I have known all this occur in cases, both when the lungs were infiltrated superiorly with primary encephaloid cancer, and when they contained secondary nodules of the same kind. (*u*) Failure of weight becomes less valuable as a sign of phthisis, the longer the thirtieth year has been passed. (*v*) The discovery of cardiac diseases with marked symptoms deposes against, but does not exclude, the existence of active tuberculisation. (*w*) The existence of cancer in any organ is unfavourable to the presence of tuberculous disease ; but tubercle and cancer *may* co-exist, even in the same lung.

" I would here add, for the sake of beginners, a few cautions in the applications of physical diagnosis in phthisis. Never attempt to give a positive opinion as to the actual state of the lungs, where there has been recent hæmoptysis, or when pleuritic effusions, bronchitis, or pneumonia is present : I of course refer to cases where there may or may not be signs of the first stage ; if excavation exist, its signs may be unravelled positively in spite of these complications. Trust very very little, if at all, to the conditions of

vocal resonance ; accept with great caution the evidence of slight changes in respiration, unless they be corroborated by percussion-changes ; place no confidence in jerking respiration (even though local) in a hysterical woman, —nor in harsh respiration limited to the right apex in any woman, nor in very very slight dulness at the right front apex in man or woman. Lastly, never give a confident opinion, in a nicely-balanced case, from a single examination ; and make examinations in various postures." (pp. 393-6.)

The conclusions at which Dr. Walshe has arrived with regard to the use of cod-liver oil in the treatment of phthisis, are as follows.

" 1. That it more rapidly and effectually induces improvement in the general and local symptoms than any other known agent. 2. That its power of *curing* the disease is undetermined ;—I mean here, by ' curing' the disease, its power of causing, along with suspension of progress, such change in the organism generally, as shall render the lungs less prone to subsequent outbreak of tubercles, than after suspension occurring under other agencies.[1] 3. That the mean amount of permanency of the good effects of the oil is undetermined. 4. That it relatively produces more marked effects in the third, than in the previous stages. Opinions the most diverse have been held on this point ; M. Taufflied[2] taught that it had little or no effect on phthisis, if at all advanced ; M. Pérey ra[3] *reduced the size of cavities in a few weeks* by its administration. 5. That it increases weight in favourable cases with singular speed, and out of all proportion with the actual quantity taken;—that hence it must in some unknown way save waste, and render food more readily assimilable. 6. That it sometimes fails to increase weight. 7. That in the great majority of cases, where it fails to increase weight, it does little good in other ways. 8. That it does not relieve dyspnœa out of proportion with other symptoms. 9. That the effects traceable to the oil in the most favourable cases are : increase of weight, suspension of colliquative sweats, improved appetite, diminished cough and expectoration, cessation of sickness with cough, and gradual disappearance of active physical signs. 10. That in some cases it cannot be taken, either because it disagrees with the stomach, impairing the appetite (without itself obviously nourishing), and causing nausea, or because it produces diarrhœa. 11. That in the former case it may be made palateable by association with a mineral acid ; and in the latter prevented from affecting the bowels by combination with astringents. 12. That intra-thoracic inflammations and hæmoptysis are contra-indications to its use, but only temporarily so. I have repeatedly given the oil within a day or two of the cessation of hæmoptysis, without any return taking place. 13. Diarrhœa, if depending on chronic peritonitis, or secretive change, or small ulcerations in the ileum, is no contra-indication to the use of the oil ; even the profuse diarrhœa caused by extensive ulceration of the large bowel is not made worse by it. 14. That the good effects of the oil are *cæteris paribus* directly as the youth of those using it,—a singular fact, which probably may one day (when the textural peculiarities of youth and age are better understood) aid in giving a clue to its mode of action." (pp. 398-400.)

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[1] " That such cures really occur in rare instances (and they are as perfect as in any other organic disease, when they do occur) is indubitable. It has been the vanity of late years to deny this absolutely, because a scientific (or pseudo-scientific?) explanation of the fact cannot be found. I am not one of those who refuse to accept the evidence of my senses, because I am unable to comprehend what they teach me, and in this matter echo the sentiments of the physician in a recent French tale, speaking of a phthisical recovery :— . . . . ' ces miracles de guérison, auxquels la Science ne croit pas, faute de les comprendre, *et devant lesquels je me prosterne, en priant la bonne et sage Nature d'en être moins avare.*' Pierre, par Madame Reybaud."

[2] " Gaz. Méd. de Paris, Nov. 1839."

[3] " Du Traitement de la Phthisie. Bordeaux : 1843."

Acute Phthisis, and Cancer of the Lung are next treated of.

Spasmodic Asthma. Under this head, Dr. Walshe states the following remarkable and important fact, with regard to the hygienic treatment of the disease. "Change of air is most important; but the kind of change that shall prove most beneficial can only be learned by experience. Some sufferers lose their paroxysms south of the olive line, others are easiest in a cold atmosphere; moisture, the bane of some, greatly mitigates the disease in others. The air of towns suits some, that of the country others; the clear suburban air of London is infinitely more noxious to some asthmatic persons than the foul atmosphere of the worst cleansed and most densely peopled localities of the metropolis;[1] occasionally an individual will be found who is tortured with asthma in one room of a house, free from it in others; and this without any distinct explanation being found in the aspect, the drainage, or any other known condition." (pp. 416-7.)

Hooping-Cough is the next subject; and then follow some remarks on Intra-Thoracic Tumours. We quote Dr. Walshe's description of the latter form of disease; and would also refer for comparison and further illustration, to a clinical lecture by Dr. Burrows, published in the *Medical Times* for June 7, 1851, and quoted at p. 661 of this Journal for July. Dr. Walshe, premising that the local symptoms and physical signs of mediastinal tumour, whether of simple exudation-matter, scirrho-encephaloid, encephaloid, fibrous, or fibro-fatty, are almost identical, observes:—

"When a tumour occupies the mediastina, and encroaches, as it commonly does, mainly in front, bulging of the sternum and costal cartilages, in a variable spot and to a variable superficial extent, may exist; the intercostal spaces, widened and flattened, are then unaffected by respiration; but, on the other hand, no shadow of bulging may exist, and yet from other signs the presence of tumour be indisputable. Wherever a tumour, of any thickness, reaches the surface, vocal fremitus is annulled; fluctuation, simple or peripheric, is not to be detected; and a double impulse is sometimes transmitted from the heart, and may be felt both by observer and patient as a sort of inward succussion. If the tumour encroach pretty equally on both sides of the chest, there may be no alteration in their relative semicircular measurement; the respiration-play is found to be impaired, and the impairment may fall rather on expiratory retraction than inspiratory expansion. If by chance either main bronchus (and it is much more frequently the right that suffers) be seriously obstructed, the respiration-play will be relatively deficient on that side, independently of the influence of any excess of tumour within the right thorax. Should the tumour encroach notably on one side or the other, and be at the same time adherent to the wall of the chest, the space between the middle line and nipple will be lengthened on the same side. Wherever tumour reaches, or closely approaches, the surface, percussion will furnish an excessively dull short sound, with highly-marked parietal resistance; the superficial dimensions of the growth may thus be traced in the front or in the spinal regions behind. The resistance and resonance of the heart and liver commonly differ from those of tumours; and hence, if the natural and morbid structures are in juxtaposition, their neighbouring edges may be defined by simple or by auscultatory percussion. Near the trachea, or

[1] "A man, one of the greatest sufferers from asthma I ever saw, lived in the neighbourhood of Chalk Farm, the pure air of Hampstead blowing across his house. I tried, I believe, almost every known remedy, in vain, for his relief. He was accidentally detained one night in the foul region of the Seven Dials; feeling persuaded he could not possibly survive till morning, so great was his dread of the close air. He not only lived through the night, however, but enjoyed the first uninterrupted sleep he had known for months. He took the hint; removed to the Seven Dials for the *benefit of the air;* and when I last saw him, some six months after the removal, continued, though still a wheezer, perfectly free from serious dyspnœa."

more generally in front, or even in the back, the percussion note may be tubular, or even amphoric. I have known it amphoric over the lower half of the right back. The auscultatory signs vary widely. The respiration may be weak, almost to suppression over the morbid mass, or (from pressure on the main bronchus) over the side generally ; or it may be of diffused or even tubular or hollow blowing type : these differences will depend on the precise relationship of the growth to the bronchial tubes and parietes ; as will the absence or presence of bronchophony or pectoriloquy of the loud form. The heart's sounds are conveyed through the solid mass with undue intensity, and if this press on the aorta or pulmonary artery, there may be systolic murmur, simulating intra-cardiac murmur at the base. Bronchial dry and moist rhonchi may be heard. The position of the heart, and of the wings or of either wing, of the diaphragm, will depend wholly on the direction in which the tumour grows: they may be considerably displaced, or retain their natural positions, even where a large mass occupies the mediastinum.

"Certain symptoms arise, or may arise, mechanically from pressure of the growth. *Eccentric* pressure causes bulging of the thoracic parietes, as we have seen, and depression of the diaphragm. *Concentric* pressure may produce dysphagia, sometimes, though rarely, of excessive pertinacity, by acting on the œsophagus ; playing on the superior cava or innominate veins, it causes distension of the jugular, subclavian, axillary, mammary, and superior epigastric, facial, frontal, and even dorsal veins, coupled with a tumid spongy fulness of the base of the neck, swollen livid discolouration of the face and lips (which look in extreme cases distended almost to bursting), and œdema of the face, arm, and affected side of the thorax or the chest generally ; encroaching on the inferior cava, pressure entails anasarca of the lower extremities ; influencing the innominate or either subclavian artery, it weakens either radial pulse ; forcing backwards, or to either side, the trachea, it induces stridulous breathing and weakness of voice (traction of the recurrent nerve may have something to do with both these symptoms) ; its effects on the main bronchus have already been referred to, and sequential to these, exaggerated respiration may be established in the other lung. Irritation and pressure-action combined may give rise to active hydro-thorax or actual pleurisy with effusion.

"The symptoms of intra-thoracic tumour are pain, very variable in amount; dyspnœa ; cough, with or without expectoration, of the jelly-like kinds (p. 412), or catarrhal ; hæmoptysis ; inability to lie with the head low, and eventually complete orthopnœa, the patient sometimes, for weeks before death, never daring to go to bed, and never enjoying more than fitful dozes. The constitution may long bear up against the local disease ; but the dyspnœa and insomnia at length affect the appetite, and emaciation sets in. The patient dies gradually, anasarcous and exhausted, or he may perish suddenly from obstruction of the pulmonary artery.

"An intra-thoracic tumour may, according to its seat, be confounded with extensive chronic pneumonia and chronic pleuritic effusion, with chronic pericardial effusion, great enlargement of the heart, or aneurism of the thoracic aorta. The distinctive marks of the cardiac and arterial affections will be found in the descriptions of these.

"Tumour will be distinguished from chronic pneumonia by the tendency to increase, instead of diminution, of bulk of the affected side, by the implication of the mediastinum, by the greater intensity of the dulness under percussion, the failure or the disappearance of vocal fremitus, which remains in chronic pneumonia, and the different characters of the respiration in the two diseases. Hæmoptysis and red jelly-like expectoration never occur in chronic pneumonia ; whereas the emaciation is of earlier appearance, and more marked than in cases of tumour.

"From empyema, tumour will be distinguished by the absence of intercostal fluctuation, simple or parietal ; by the greater intensity of dulness

under percussion; by the limits of the dulness not being changed by altering the patient's position (p. 284); by the interspaces not being convex; occasionally by the intensity of blowing respiration; by the clear transmission of the heart's sounds; by the comparative irregularity of outline of the side, some spots being more prominent than others; by the fact, that in cases of tumour, careful percussion will almost surely detect some spot giving a comparatively clear sound, where, according to the laws of physics, liquid, had this been the cause of the general dulness, must have made its way, and hence caused dulness there as well as elsewhere; by the whole class of concentric pressure-signs; and, if they have occurred, by hæmoptysis, or by the jelly-like expectoration.

"A patient having mediastinal tumour may also have empyema on the side most encroached on, generally the right. If the patient be seen for the first time, when the two diseases are present, and if precise medical information as to the previous course of the complaint be wanting, this combination may be very difficult of diagnosis. But empyema does not produce concentric pressure-signs, nor give rise to hæmoptysis or jelly-like expectoration; if these symptoms be present, there must be, in addition to empyema, either tumour or aneurism. Besides, the test of moveableness of dull sound (p. 284) may be appealed to with considerable confidence.

"Given an intra-thoracic tumour, how may its *nature* be determined? If the signs of infiltration of the lung co-exist, the tumour, as far as I have seen, is either composed of simple exudation-matter (of these I have examined three microscopically) or cancer. If the tumour present externally, it is cancer; if tumours exist elsewhere, either secondary to, or independent of, that in the chest, supposing even *their* nature cannot be established directly, the chances are strong, that the thoracic growth is cancerous. Violent hæmoptysis is more common with cancerous than other growths; expectoration of cancer can, of course, only occur with the former. The constitutional characters of cancerous disease may be wanting.

"Intra-thoracic tumour is, of course, beyond the *permanent* influence of *treatment*. But it is astonishing what marked *temporary* improvement of all the direct symptoms may be effected by cautious cupping, dry-cupping, flying blisters, profuse inunction with an ioduretted liniment, gentle purgation, and diuretics. I have twice, within the last year, known the diagnosis of intra-thoracic tumour contested, on the grounds of the relief produced by such measures; yet, post-mortem examinations, in one instance in three, in the other, in seven weeks, proved the existence of massy growths. Unfortunately, all therapeutical means soon cease to avail us; and I know no more truly painful spectacle than that of the closing sufferings inflicted by mediastinal tumours." (pp. 421-425.)

The Second Chapter of this part is devoted to Diseases of the Heart.

Functional Disease of the Heart is treated of under the head of increased, perverted, and defective action. Functional heart disease, according to Dr. Walshe, is not always readily distinguished from organic disease. Œdema and congestion may result from spanæmia and nervous palpitation.

Angina Pectoris, and Passive and Mechanical Congestions of the Heart, come next in order.

Pericarditis is described as acute and chronic. The acute disease, in its complete evolution, passes through five anatomical stages,—those of vascularity with dryness, of plastic exudation, effusion, absorption, and adhesion, each of which has its own special physical signs. In the diagnosis, the essential signs are friction sound, special præcordial dulness, and twisting upwards of the heart's apex. Friction sound, when thoroughly developed, is next to pathognomonic; but there is a possibility of fallacy from pleural friction with cardiac rhythm. Mediastinal pseudo-rhonchus, and the squashy rhonchoid sound, sometimes produced over the heart, when the integuments

are œdematous, are other possible sources of difficulty. For the remaining remarks on the diagnosis, we must refer our readers to the book.

In the treatment, Dr. Walshe gives the first place to blood letting, the second to mercury. In rheumatic pericarditis, colchicum should never be omitted; it may be given as a draught with the mercurial pill. Opium, purgatives, diuretics, and diaphoretics, are necessary or advisable. Blisters on the cardiac region interfere too much with examination; but the same objection does not apply to sinapisms, which often afford great relief. Digitalis, aconite, and hydrocyanic acid, are dangerous.

Under the term *chronic pericarditis*, are included two different states,—"that in which effusion remains in the sac without apparent inclination to increase or to disappear; and that in which adhesions or agglutinations of the pericardium having formed, a tendency to active congestion in the pericardium itself, and in the substance of those adhesions, is more or less constantly present. The former condition is rare; the latter common." (p. 450.)

Endocarditis, Carditis, Cardiac Hæmorrhages, Hydropericardium, and Atrophy, are next brought under consideration.

Hypertrophy. This affection is described as affecting the compartments of the heart in the following order of frequency: 1. the left ventricle; 2. the right ventricle; 3. the left; and 4. the right auricle. In speaking of the symptoms produced by hypertrophy of the left ventricle, Dr. Walshe contests the opinion, that apoplexy is a sort of appanage of the heart affection; but he thinks that the whole subject calls for fresh investigation. "It may," he says, "eventually be found, that the fatty diathesis is the real link between cerebral hæmorrhage and heart disease,—fatty enlargement of the heart on the one hand, fatty degeneration of the cerebral vessels on the other." (p. 471.) He believes that hypertrophy alone is rarely, and probably never rapidly, the cause of death.

In the treatment, Dr. Walshe prefers moderate local, to general depletion, for tranquillising the heart, by diminishing the quantity of the circulating fluid. "There is no known drug possessing the faculty of directly controlling the growth of the heart: iodine seems quite valueless; general principles alone guide us in attempting to put a term to the increase of its bulk. Purgative medicines, and, I believe, the saline and aloetic, are the most appropriate of the class; and the effects of local bleeding, diuretics, are useful, quite independently of the existence of dropsy. Direct sedatives of the heart, hydrocyanic acid, acetate of lead, digitalis, and belladonna (the latter both internally, and in the form of a plaister to the surface), must be employed, with occasional intermissions, during the entire treatment of the case. Of all medicines of this class, aconite seems the best: the alcoholic extract of the root may be given in doses of one-eighth of a grain with perfect safety: no drug, that I know of, possesses so fully the power of relieving painful sensations and disquietude about the heart." (pp. 473-4.)

From the section on Dilatation, we quote the following propositions, which bear on the general doctrine of the production of dropsy by disease of the heart:—

"1. Mitral regurgitation or obstruction, or aortic regurgitation or obstruction, may severally exist, and, for a lengthened period, without systemic dropsy supervening. 2. This proposition continues true, whether hypertrophy exist behind the obstruction or not. 3. Simple hypertrophy of the left ventricle may reach the highest point without systemic congestive effects of any kind. 4. Dilated hypertrophy, even of the left ventricle, may last for years without any such effect, provided the dilatation be not in notable excess. 5. The heart may be weak and feeble, or actually in a state of fatty disorganisation, and the pulse feeble and irregular, and yet no systemic congestions occur. 6. The natural relationship of width of the arterial orifices, and also of the auriculo-ventricular orifices, may be materially perverted,

without the least systemic dropsy arising.[1] 7. Tricuspid regurgitation, where the right ventricle is in a state of dilated hypertrophy, as shown during life, by swollen and pulsatile jugular veins which fill from below, and as shown after death by actual examination, does not necessarily produce dropsy.[2] 8. It would appear, then, that something beyond all these cardiac conditions is wanting to ensure the occurrence of dropsy, unless on the gratuitous assumption that, were life sufficiently prolonged, they would in themselves of necessity induce it. What that something beyond the heart, conducive to dropsy, probably is, I will by-and-bye state. 9. The cardiac affections most frequently connected, as matter of experience, with systemic dropsy, are dilatation and tricuspid regurgitation ; and it is certainly very rare for either of these states to exist for any length of time without the supervention of such dropsy ; any hypothesis, explanatory of cardiac dropsy, must look to these states as forming important links in its chain of causes. 10. But the something beyond the heart ? This is probably furnished by certain conditions, favourable to transudation of the serosity of the blood, in that fluid itself, in the walls of the capillaries and venous radicles, and in the receiving tissues. As concerns the blood, the influence of an impoverished state of that fluid is too well known to be for a moment contestible. Again, it is readily conceivable that the variable density of texture of the walls of the vessels shall promote or restrain the process of filtration. Lastly, cases occasionally present themselves, in which dropsy, supervening from diseased heart, fails to affect portions of the body, noted, under ordinary circumstances, as the earliest and readiest sufferers,—for instance, the lower extremities. I have observed this where the legs had been the seat of erysipelas and subcutaneous inflammation prior to the occurrence of the cardiac dropsy ; the chronic anatomical changes in the cellular tissue in such a case, possibly act as a barrier to its reception of serosity from the vessels. Dilatation of the heart, occurring as a primitive disease through simple weakness, or actual organic alteration of the texture of the organ, may be easily supposed, *à priori*, capable of generating systemic congestion and its results. In a heart so affected, the necessary *vis à tergo* is deficient,—capillary stagnation ensues. Now this very stagnation, becoming habitual, may modify the qualities of the blood, and impair the nutrition of the walls of the vessels through the strain they suffer. But change in the blood is, in all probability, worked out meanwhile by other and more effectual agencies." (pp. 478, 480.)

Passing over several interesting subjects, we come to DISEASE OF THE ORIFICES. Dr. Walshe enumerates each class of signs apart, under the heads of mitral regurgitation, mitral constriction, tricuspid regurgitation, tricuspid constriction, aortic constriction, aortic insufficiency, pulmonary constriction, and pulmonary insufficiency. He makes the following important practical remarks on the physical examination of VALVULAR DISEASE:—

" In fixing the seat of production of any given murmur, the first point for the observer to establish, is the position of the heart itself : if this be abnormal, as it very often is in consequence of changes in its substance, allowance must be made for its influence in altering the maximum position of murmurs. Now, the general tendency is to some form of enlargement of the organ, and as enlargements lower it, the maxima points of murmurs are very commonly slightly lower than the maxima points of the corresponding sounds in health. Certain conditions of the aorta or pulmonary artery, of the lungs, pleura, or

[1] Case of Cyanosis. Med. Chir. Trans., vol. xxv, p. 1.

[2] " W. Hallington, ætat. 53, died at University College Hospital, April 7, 1849, with fatty dilated enlargement of the heart (weight 17½ oz.), dilatation of the tricuspid and mitral orifices, and aortic regurgitation carried to a great extent, and yet not a particle even of œdema about the ankles had appeared. The patient had also an aneurism of the aorta, at its bifurcation; but this could not be held to be *preventive* of dropsy."

mediastinum, also throw murmurs into unnatural sites, by changing the position of the heart. Pleural fluid accumulations have more influence on apex than on basic murmurs, for an obvious reason.

"The state of the heart's substance also may exercise a direct influence on the intensity of the murmurs. Thus hypertrophous texture, lying in the course of the circulation, behind a murmur, will intensify this, if it be direct; exercise little effect on it, if it be regurgitant: take the instance of an hypertrophous left ventricle with severally a constrictive and a regurgitant aortic murmur. Hypertrophous texture, lying in front of a murmur, is without effect upon this, if it be direct; intensifies, if it be regurgitant: take the instance of an hypertrophous left ventricle with severally a constrictive and a regurgitant mitral murmur. Dilatation and weakening affections of the heart's substance weaken any direct murmurs through orifices on which such substance may play. Dilatation lessens the force of a regurgitant murmur, in so far as power of backward propulsion is concerned; but as, on the other hand, it allows of considerable accumulation of blood for regurgitation, the weakening influence is somewhat counterbalanced. The physical conditions of a given murmur positively existing at a given orifice, the character of that murmur may be seriously affected by the anatomical state of other orifices. Thus, aortic constriction may be almost murmurless, if there be any great coexistent regurgitation, the aortic current is so seriously weakened by such regurgitation.

"Of two murmurs produced synchronously at different orifices, one may mask or cover the other. An aortic constrictive and a mitral regurgitant murmur may exercise this influence on each other; and a mitral regurgitant may completely drown a tricuspid regurgitant. In the interspace between the maxima points of two synchronous murmurs, however, a spot may generally be caught where the intensity of murmur is less than at either, and the quality different.

"An hypertrophous and widened state of the aorta will intensify its own regurgitant murmur; and if slight pouching exist at the sinuses of Valsalva, the rippling direction thereby given to the current will intensify both a direct and a regurgitant murmur. The state of the blood, too, is important; spanæmia greatly strengthens the force of murmurs of all kinds. The pulmonary veins and superior cava may be the seat of spanæmic murmur, simulating especially systolic apex and diastolic basic cardiac murmurs.

"Again, modified conducting power of adjoining textures may lead to error: thus an aortic regurgitant murmur may be heard better to the left than to the right of the sternum, if the left lung be solid, and the right emphysematous." (pp. 509, 511.)

Malpositions, Cyanosis, Rupture of the Heart, Aneurism of the Heart, and Polypoid Concretions, are next treated of, and with them the chapter on Diseases of the Heart terminates.

The Third Chapter contains an account of Diseases of the Aorta, arranged under the heads of Aortic Pulsation, Aortitis, Atheroma and Calcification, Coarctation and Obliteration, and Aneurism. We had intended giving some extracts from this chapter, but we find that we have already occupied so much space, that we must bring our analysis to a conclusion.

The general opinion which we have been led to form from a perusal of Dr. Walshe's book, is, that it is the production of a laborious and careful observer of facts, who has been desirous of placing before the profession the results of his own observations. Observation is his *forte;* and in this he is a worthy disciple of his great preceptor, Louis. And we would assure Dr. Walshe, that, though we do not pledge ourselves as yielding an implicit assent to everything he says, yet we meet him here with far more pleasure than when we protested, two years ago, against his sweeping condemnation of physiology

as a guide in medicine. We are sure that both the merits of the book, and the high reputation of the author, will ensure for Dr. Walshe, on the *Diseases of the Lungs and Heart*, an extensive and rapid circulation among the enlightened practitioners of the present age.

Sleep and Dreams. By John Addington Symonds, M.D., Bristol. Bristol: 1851.

Were any apology for the publication of Dr. Symonds' lectures upon Sleep and Dreams necessary, it would be found no less in the interest of the subject than in the author's philosophical mode of handling it. The mystery which yet envelopes the action of the nervous system, and the importance of its solution, must attract all observers of nature to any attempt at discovery undertaken in a proper spirit and with due preparation; and we are bound to say, that in the lectures now under review, there are to be found research, candour, and intelligent information, equal to the generalizing both of facts and doctrines. Further, the style is not such as to repel inquiry into, or acquaintance with, the subject matter of the work; the quotations are apt, adding force and vividness to the descriptive parts, while the language employed is sufficiently precise for the physiologist, yet simple enough for the general reader.

In his first lecture, which is devoted to Sleep, the author begins by a description of its ordinary phenomenon, and then refers to its morbid states, the metaphysics of which he explains upon Bishop Berkely's theory. Our author next sketches the physiology of the brain and nervous system; and in the course of his speculations upon the changes which it undergoes during sleep, he adduces the opinions of the most eminent authorities of the day upon such subjects, and amongst others that of Dr. Snow, who propounds that sensation, motion, and thought are closely connected with certain processes of oxidation going on within the body, which processes are stayed during sleep, whether produced naturally or by narcotics.

The circumstances favourable to sleep are then described, amongst which plethora is particularly insisted upon, and with much propriety, as the experience of all whose attention has been directed to the subject can testify. But the mode in which plethora determines sleep is not described, or rather the description is such, that the impression conveyed to the mind of the reader must lead him to the belief that the cranium actually receives and contains in such circumstances a larger portion of blood than usual, a doctrine which we had supposed to have received its *coup de grâce* long ago in the hands of Abercrombie, Hughes, Reid, Kelly, and more lately from Professor Bennett. The integrity of the principle thus established, is by no means impugned by the fact of passion acting as a cause of sleep; on the contrary, it has been shown that all the effects of plethora are brought on by an opposite state of the system, inducing pressure by an alteration in the balance or proportions of the arterial and venous circulation within the head, which, in all cases connected with extravasation or morbid excess in the fluids of the brain, must be held to be the cause of mechanical compression of that organ. The auxiliaries to healthy sleep are pleasingly dwelt upon and illustrated, and of these we fully agree with the author, that none ranks higher than "a conscience void of offence towards God and towards man", when—

> "Nec lenes somnos timor aut cupido
> Sordidus aufert."

The second lecture is devoted to Dreams, and offers as complete and reasonable an explanation of their occurrence as the present state of physiology can supply. However, if dreamless sleep be dependent partly upon pressure on the brain, it might have been worth while to inquire what parts of the brain are naturally most obnoxious to that influence, and whether any rela-

tion could be traced between immunity from pressure, and activity in those parts of the organ so relieved. With reference to the action of narcotics and the *modus operandi* of indigestion in producing imperfect sleep and dreaming, a little inquiry would have been highly interesting. The psychological aspect of the subject receives a due share of the author's attention, and in truth is that point of view most likely to attract general notice. For its further elucidation, we would suggest to the author, that those classes of observations all tending to confirm a fact observed by himself, viz., the ease with which ideas are suggested during imperfect sleep, are worthy of being minutely considered. The first of these, then, consists of external impressions, as cold, heat, etc.; the second of impressions caused by some irregularity of the nutritive process; and the third of those manipulations of Mesmerists by which certain ideas can be excited or suggested. Whatever notion may be entertained of the nature of mind, it is very certain that mental phenomena are never manifested disassociated from certain forms of nervous matter, and this consideration is favourable to the opinion now almost universally entertained, that the path to discoveries on this subject lies in the investigation of physical action. The treatment of the subject of dreams would not have been complete without a reference to their prophetic import, which is discussed in a thoroughly enlightened manner. We would not flatter the author that his reasoning is likely to convert any considerable number of the old women of either sex who believe in dreams, but we can easily suppose that many of his hearers whose nursery impressions had not been entirely effaced, may have been led to the consideration and ultimate settlement of a question which heretofore they had been content to consider an open one. We must now conclude this hasty notice with a recommendation to all whom it may concern to peruse Dr. Symonds's lectures, and we promise them an antidote to the soporific title of the subject, in the philosophic and entertaining style in which it is treated.

Beasley's Pocket Formulary of the British and Foreign Pharmacopœias. pp. 546. London: 1851.

This small volume is barely within the scope of our Journal, although addressing itself in the advertisement to the medical practitioner and student; for it would prove of but slight use to the former, and none at all to the latter.

It was originally compiled "as a Counter Companion to the Dispensing Chemist", for which purpose it appears to be well adapted, as it contains many of the formulæ of the Foreign as well as of the British Pharmacopœias; and as the daily increasing facilities of travelling multiply our visitors from the Continent and the United States, the necessity of compounding prescriptions according to the Pharmacopœias of various countries will be forced upon Chemists and Druggists, especially in our large towns, in which case this book will prove a useful guide.

It would however be far more useful were it reduced in bulk, and a heap of such rubbish as the following weeded out:—"Electuarium Anticachecticum, *Bath Electuary*", consisting of "the heaviest and bluest clinkers from a blacksmith's forge", powdered and made into a stiff paste with treacle, and then mixed with a little carbonate of magnesia and ginger; Linimentum Zingiberis, a "remedy for *short-sightedness*", and such like stuff with which the book abounds. The nomenclature is also very faulty, ancient and modern terms being indiscriminately used; nor has the author always kept in mind the alterations in the new Pharmacopœias; he thus orders the same quantity as formerly of acid. sulph. dil. to be used in making tartaric and citric acids, whereas it should be increased, this preparation of the London College being weaker than before. So far, however, as we have compared it with the original, the formulæ generally appear to have been carefully extracted; and we think the book is one which may often prove useful to the Dispensing Chemist.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

DR. E. D. FENNER ON THE FEVERS OF NEW ORLEANS, PARTICULARLY THE YELLOW FEVER OF 1849: ABORTIVE TREATMENT BY QUININE.

The following is derived from Dr. Fenner's valuable Report on the Fevers of New Orleans, originally published in 1849, in the *Southern Medical Reports*, vol. i, p. 109: and reprinted in the *Edinburgh Med. and Surg. Journal* for October 1851.

In New Orleans, as well as in the surrounding country, the fevers are intermittent, remittent, and continued, "alternating in type, and running into each other." In summer and autumn, they have a decided tendency to crisis by hæmorrhage: "this", says Dr. Fenner, "*makes yellow fever:* it forms the true characteristic difference between the high degrees of summer and autumnal fever in the city and country, and must depend on locality and attendant circumstances. During the healthiest years, it predominates over all other types; but during the sicklier years, in the country, it runs into remittent, bilious, and congestive; whilst in the city, it runs into yellow fever. Dr. Harrison testifies, that he had often observed malignant intermittents immediately to precede the outbreaks of yellow fever epidemics."[1]

Dr. Fenner's observations being drawn from a vast public and private experience; and in particular from observations made in, and from the statistics of, the New Orleans Charity Hospital, which is probably the most extensive fever hospital in the world, the following statement is of peculiar force:—"Physicians may say what they please about being able to distinguish a case of yellow fever, as soon as they examine it: we do not believe it possible, according to their ideas. Rarely does a summer pass, in which we do not hear of some intelligent and experienced practitioner being perfectly asto-

[1] These statements testify to the *general truth* of the opinion, that fevers differ as to their degree but not as to their pathology. Dr. Cormack, writing in December 1843, upon the Edinburgh epidemic fever then prevailing, says:—"From a careful study of two hundred cases, and the casual observation of twice as many more, I have found, that many had an interval of perfect health between the attacks, whereas others had only a remission,—that a number of both of these classes of patients had jaundice, hæmorrhages, and vomiting of black matters,—yet so distinct was the connecting link of cases between these groups, that it never occurred to me (nor to any one else, I suppose) to consider, that these variations in some of the phenomena, constituted two distinct fevers. Symptomatic distinctions are important in the regulation of the treatment; but, were they adopted in speaking of the pathology of the disease, they would lead only to partial, and erroneous views. It is the arbitrary method of classification, and the dressed-up descriptions of systematic authors, which make it appear to the cursory student, that the fevers of tropical climates are different from those of this and other temperate countries; whereas, were epidemics of different climates studied as they actually occur, it would be found that fevers differ as to their degree, but not as to their pathology." . . . As an illustration of the "breaking up of an epidemic into different fevers, for the purpose of making a neat return", Dr. Cormack quotes one of the tables from the Army Reports referring to Jamaica, adding this remark: "The cases styled remittent fevers, might very often with as much propriety have been called yellow fever; and in the other classes, difficulties would occur as to the distribution." *Cormack on Fever*, pp. 99, 100. Edinburgh: 1843.

nished at seeing what he had pronounced a case of intermittent or remittent bilious fever terminate in black vomit or other hæmorrhage."

Dr. Fenner is a very warm advocate in favour of the administration of large doses of quinine for the purpose of cutting short yellow fever. In fact, he urges the excellence of the abortive treatment of yellow fever, with the same confidence that Dr. Dundas recommends the same treatment in the continued fevers of this country. The experience of Dr. Fenner certainly gives additional strength to the important practical doctrine, which Dr. Dundas has brought before the profession.

The following are Dr. Fenner's remarks on the therapeutic action of the sulphate of quinine :—"The sedative powers of large doses of quinine, given during the early exacerbation of our summer and autumnal fevers, remittent, bilious, and yellow, have been proclaimed by some of the physicians of this city, by the army surgeons, and by the physicians of the Southern States, in the medical journals for the last ten years. We perceive that these views are gradually extending to the North, and will certainly take there, if properly tested ; but it will require some time to prepare the minds of our northern brethren for such a revolution in therapeutics, as they must effect when established. The wonderful powers of the sulphate of quinine over the yellow fever of New Orleans, are briefly but forcibly set forth in the essay of the late Professor John Harrison, in the second volume of the New Orleans *Medical and Surgical Journal*. Also by Dr. J. Beagnot, a prominent French practitioner of your city, in the first volume of the same Journal. Dr. Beagnot informs us, in a recent conversation, that notwithstanding the favourable mention he then made of the abortive treatment, by large doses of quinine immediately after free blood-letting, he did not adopt it ; but relied chiefly on the lancet alone." . . . . . " Quinine is given in five or ten grain doses by a number of physicians of this city, and the southern country, who have not yet adopted the abortive method. This is a great improvement ; but they will go farther after a while. We saw twenty grains with twenty-five or thirty drops of laudanum given at the Charity Hospital, in the early stages of yellow fever, by physicians, this seasons, who would have shuddered at such a prescription three years ago."

ENLARGEMENT OF THE SPLEEN AS A CONSEQUENCE OF INTERMITTENT AND REMITTENT FEVER: ITS TREATMENT BY IRON AND IODINE.

The Madras Medical Board has published a valuable report, by Dr. G. Smith, " On enlargements of the spleen observed during an epidemic of intermittent fever, which attacked the 18th regiment Madras native infantry, in Goomsoor, in 1847-1848." The facts adduced point out, if that be still necessary, the visionary nature of the doctrine of Piorry, viz., that the enlarged spleen is the cause and not the consequence of intermittent and remittent fever. In the first instance, the enlargement is transient and dependent on simple sanguineous congestion : in chronic cases, we find more or less permanent induration and change of structure, but the nature of the latter has not yet been fully made out. The *Edinburgh Monthly Journal* (October 1851) gives the following summary of Dr. Smith's treatment.

" In some cases, even in persons who had suffered often from intermittent, the mere arrestment of the fever, with the subsequent use of laxatives and diaphoretics, removed very considerable enlargements in periods varying from five to ten days ; in one instance, a cure was effected in sixteen days, though the edge of the spleen was at one time an inch and a half below the umbilicus ; and occasionally the cure takes place quite suddenly, the spleen returning to its natural size within four-and-twenty hours, though it may have remained much enlarged for several days after the cessation of fever. When these simple measures do not appear in a few days to promise speedy

recovery, the remedies principally to be depended on are chalybeates, and the stimulus of pressure and kneading. Dr. Smith usually gave iron in the form of sulphate, and along with aloes and iodine. Two grains of sulphate of iron, two of aloes, and one of iodine, were given twice or thrice a day, in the form of pill, made up with aromatic confection; and twice or thrice daily the enlarged organ was subjected to firm kneading with the hands. The efficacy of this treatment was tested by subjecting some severe cases in the first instance to diet, regimen, and laxatives alone, without avail. Even where there is reason to suppose, from the long duration, and great extent of the enlargement, that the disease must have advanced partially to the stage of hypertrophy, a cure may be accomplished by the same means; but then it is tedious, and may extend through several months.

"While it appears that few can resist the tendency to spleen disease, in localities so favourable as Goomsoor to the production of intermittent, Dr. Smith mentions some interesting facts, in proof that some constitutional tendencies must predispose to visceral disease in such circumstances, and others operate as a protection. It is remarkable that in the epidemic he describes, the European constitution seemed less inclined to disease of the spleen than that of the natives. Of twenty-three European officers, twenty had fever; but none of them suffered from enlargement of the spleen. And he adds the case of an officer who had constantly remained exempt during repeated attacks of severe ague, throughout a period of twenty years. Age diminishes the predisposition; for the disease occurred almost entirely among the young and middle-aged sepoys, the old members of the regiment, who suffered from fever, being very rarely observed to suffer from enlargement of the spleen."

PATHOLOGICAL RESULTS OF BRONCHITIS.

I. Primary Results of Bronchitis.

(*a*) *Obstruction of the bronchi from swelling of mucous membrane and from secretion.* The anatomical condition consequent on such obstruction, when long continued, as in the case of inspissated secretion, is collapse of those portions of the lung to which the affected tubes are distributed. The collapsed condition is often termed "carnification", and is identical with the infantile atelectasis; it is denoted by condensation and want of air, without appreciable exudation, comparative increase of weight, an unusually dark colour, the consistence unaltered. This collapse may be diffused, or limited and lobular, the latter being a form which has been so often described as "lobular pneumonia". It is, however, destitute of the minute granular aspect of true lobular pneumonia; under the microscope, scrapings from its surface show only blood-corpuscles, epithelium, and a few pus-cells from the bronchi, instead of the abundant granular elements and cell-forms which are obtained from lungs in which exudation has occurred; and, in the majority of cases, the condensation is removed by inflation.

The general result of Dr. Gairdner's inquiries in this direction is expressed in the following propositions:—

"1. That in all cases of collapse of the lung not caused by external pressure, the bronchi have presented unequivocal appearances of obstruction.

"2. That in most, if not all, the instances of severe and fatal bronchitis, especially if the secretions had become ropy or inspissated, more or less collapse of the pulmonary texture has also been present."

The mechanism of this bronchitic collapse is thus explained: it is argued and shown to be probable, from all the facts that can be brought to bear on the subject, that obstruction in a bronchial tube, even if it be incomplete, leads to diminution in the quantity of air contained in the tubes beyond the obstruction. To account for this, it has even been supposed that the air is absorbed into the vessels; but Dr. Gairdner justly puts aside this hypothesis,

and believes that the comparative greater power of the expiratory over the inspiratory act (as 3 to 2) may account for the diminution of the air. The peculiar nature of the obstruction will also aid the expiratory act, as it is pointed out, that, the bronchi being a series of tapering and dichotomizing tubes, a tough pellet of mucus will fall towards the smaller end, and, during inspiration, will of course pass onwards still deeper into the narrowing tube, and perfectly block it up; while, in expiration, if it can be moved at all, it is forced into the wider portion of the tube, and allows the air to pass. And, in addition to this, if the plug be insufficient to close the main tube, it may be carried against one of the openings of the next bronchial division, and completely block it up. Besides these causes, anything which tends to produce insufficiency of the inspiratory act will aid this.

(*b*) *Bronchial Abscess.* In the centre of a lobule collapsed from bronchial obstruction, a small collection of pus can sometimes be found, varying in size from a hemp-seed to two or three times that size; the pus is sometimes surrounded by a "villous" membrane, at other times lies in contact with the pulmonary tissue; the tubes leading to such abscess are found much inflamed. This lesion is most common in children, but is found in adults, and has often been described as tubercle. The origin of these abscesses appears to be,—first, the collection of pus in the central bronchi of a collapsed lobule; secondly, the retention of this by changes in the bronchus higher up; and, finally, softening, and ulceration of the coats of the central bronchi and escape of the pus among the adjoining parts.

2. Secondary Results of Bronchitis.

Dr. Gairdner remarks, that, notwithstanding the apparently grave nature of bronchitic collapse, many cases get well. In inquiring into the mechanism of recovery, he takes occasion to point out, that the great function of the muscular fibres in the bronchial tubes may be a deobstruent one; that these fibres, which are certainly passive in the respiratory act, may be constantly undergoing a kind of peristaltic action even in health, which tends to force on the secretions in the tubes. Consequently, in collapse, these fibres may succeed in dislodging the thickened mucus, and in rendering the tube again free to the passage of air. He then goes on to remark on the production of

(*a*) *Emphysema.* From an analysis of forty cases of emphysema, it is shown, that 67 per cent of all cases of emphysema are connected with pulmonary collapse of other portions of lung; that 10 per cent. are connected with hepatization; and 20 per cent. with tubercle.[1] There is, therefore, evidently some intimate connexion between the first-named lesion and emphysema. The most common anatomical seat of emphysema is at the anterior borders of the lungs; while that of bronchial collapse is in their posterior and depending parts; and the way in which the former is produced by the latter is by a disturbance of the mechanism of respiration, that is to say, the collapse of some portions of the lungs permits the over distension of other and previously sound portions. The anatomical postulate, if we may so term it, of emphysema of one portion, is diminution of bulk of another part; and this diminution is most commonly from the pulmonary collapse of bronchitis; but it may be from the cicatrization of cavities, or other causes leading to atrophy of a portion of lung.

(*b*) *Permanent Atrophy of Lung.* Another secondary result of bronchitis is chronic collapse passing into actual atrophy, in which the tissue becomes impermeable to air from actual obliteration of the air-cells. Here the result is the same as after long-continued compression from pleuritic effusion. In such cases of atrophy, the affected parts are reduced to a lax fibrous or are-

[1] Dr. Gairdner observes, that the dogma of the antagonism of tubercle and emphysema, or rather of venosity and tubercles, derives no support from the results of his cases.

olar texture, enclosing the remains of bronchi and vessels, perfectly flaccid, free from all induration or abnormal exudation.

(*c*) *Bronchial dilatations* are ascribed in part to the expansive forces of inspiration acting upon the bronchi of atrophied lung; but it is also argued, that they are "the result of ulcerative excavations of the lung communicating with the bronchi." These excavations then become lined with a false membrane, which is smooth, glistening, and not very vascular, and which is continuous with the lining membrane of the undestroyed bronchial tubes.

(*d*) *Pulmonary Concretions and Cicatrices.* Both concretions and cicatrices have been referred to obsolete and cured tubercle, and no doubt this view is, in a great number of cases, the correct one. But as excavations occur not only from softened tubercle, but also (as it appears) from ulcerative processes following simple bronchitis, broncho-pneumonia, syphilis, gangrene, isolated and multiple abscess, etc., so also such cavities may heal, and give rise to cicatrices, which can only be distinguished from healed tuberculous cavities by collateral evidence. So also concretions, though so often of tuberculous origin, may yet be derived from any other form of pulmonary ulceration or abscess.

Such is a short, and necessarily an imperfect abstract of a very interesting series of papers, the facts of which have to be tested by the observations of others before they can be definitively admitted by practitioners, but which have certainly been collected with great care and industry, and which, as far as we can see, bear on them the impress of truth. (*Edinburgh Monthly Journal*, as abridged in *Medical Times.*)

ON SUPERNUMERARY FINGERS AND TOES. BY ROBT. CRAWFORD, M.D.

"The following facts," Dr. Crawford remarks, "are worthy of being put upon record. They are curious and interesting in a physiological point of view, as illustrating the *paternal* influence on the *physical* conformation of the offspring, and afford an example of the rare occurrence, that a man may have by different women children with the same malformation, as observed by Luber and Meckel, and, what is more rare still, that a deformity of the *father* may be transmitted to his children, as remarked by Burdoch and Osiander,—nay, even to his children's children, disproving the notion frequently entertained, that monstrosities are dependent on the imagination of the mother, frights, etc., etc., and, I may add, are independent of any *original* malformation of the germ, which has been assigned as a cause of these aberrations of nature.

"Mrs. T., after a safe and speedy labour, was delivered of her second child, a strong healthy male, on 19th ultimo. The infant had two supernumerary fingers, one attached by a pellicle to the external aspect of the metacarpo-phalangeal articulation of each little finger. They were well formed, with nails and three phalanges each, but the tendons were in a very rudimentary state. Mr. Craig informs me that his former assistant, Dr. Legat, now in extensive practice at South Shields, attended Mrs. T. in her first labour, and removed from the baby (a female) two supernumerary fingers similarly situated. I have ascertained also from Mr. T., that he had two fingers removed in infancy from the same parts of the hands as his children had, the cicatrices of which he showed me. He has, besides, six toes on each foot. The supernumerary toes project from the dorsum of the middle metatarsal bones. All Mr. T.'s brothers and sisters had more than the natural number of fingers or toes,—some both. His father, who had six toes on each foot, by a second marriage had a son and three daughters. There was nothing peculiar about the latter, but the son has the proximal extremity of both great toes single. They appear to bifurcate about the centre,—or rather, each forms, *from the centre*, two toes surrounded by one continuous skin, terminating at the distal extremity by two nails each. A sister of Mr. T.'s, married, had four children, of whom one (a daughter) has six toes on each foot.

"On the authority of a respected clerical friend, I also state the following facts, which he can personally verify, and which occurred in a parish where he at one time held the *cure:*—

"A female relative (either a sister or aunt) of A. B., had a child with a supernumerary finger or toe on each extremity. A. B. married, he had eight children, two of whom had six fingers or toes on each extremity. A young woman in the neighbourhood accused A. B. of being the father of a child with which she was pregnant; but this he strenuously denied. The woman brought forth twins, and each had six fingers on each hand, and six toes on each foot,—certainly a remarkable coincidence, if the woman's accusation was false; but more probably a strong presumptive proof of the paternity of the offspring. I may add an instructive medico-legal fact, which occurred in the same locality, and which I state on the same authority. A theft was committed, and the authorities, while investigating the matter, detected the impression of a foot on the soil; it presented the appearance of *six toes*, and was traced to the son of A. B. without any difficulty." [*Edinburgh Monthly Journal*, October 1851.]

APPOINTMENTS.

Black, Dr., appointed Warden to the Collegiate Establishment of St. Bartholomew's Hospital, in the room of Mr. Paget, resigned.

Henry, Alexander, M.D., appointed House-Surgeon to the West Kent Infirmary.

Miller, Dr., of Chelmsford, appointed Inspecting Physician of the Lunatic Asylums of the County of Essex, in the room of the late Dr. Badeley.

Parker, Dr., elected Assistant Physician to the London Hospital, in the room of Dr. Pereira, appointed Physician.

OBITUARY.

Hooper, R. L., M.D., of High-street, Newington Butts, aged 55, on 8th November.

Semple, Robert, Esq., many years Medical Officer to the parish of St. Mary, Islington, in Cross-street, Islington, aged 62, on 5th November.

TO CORRESPONDENTS.

Homœopathy. Various communications have been received on this subject; and their authors will be duly communicated with.

OUR NEW VOLUME.

The January and February numbers will contain Communications by:—

Dr. C. J. B. Williams.
Dr. Tyler Smith.
Dr. Sandwith, (Hull.)
Henry Lee, Esq.
Edward L. Falloon, Esq., (Liverpool.)
W. H. Gardner, Esq.
Dr. Mackenzie.
Dr. James Bird.
Dr. Moore, (Ballymoney, Ireland.)
William Harvey, Esq.
and others.

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